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WEEKLY WEATHER REPORT.

1880.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

LONDON:
PRINTED FOR HER MAJESTY'S STATIONERY OFFICE;
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J. D. POTTER, 31, POULTRY, AND 11, KING STREET, TOWER HILL;
AND E. STANFORD, CHARING CROSS.

1237

WEEKLY WEATHER REPORT, 1880.

REPORTS RECEIVED TOO LATE FOR INSERTION IN THEIR PROPER PLACES.

No. of Report.	For Week ending	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine	
			Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Number of Hours recorded.	Per-centage of possible duration.
			°	°	°	°		Inches.	Inches.		
1	January 5 -	Glenalmond - - -	52	28	39·8	+1·3	7	1·71	?	—	—
„	„ -	Shrewsbury - - -	58	35	43·4	+3·7	2	0·31	−0·14	—	—
„	„ -	Barnstaple - - - -	54	38	46·6	+4·3	6	0·98	−0·08	—	—
3	„ 19 -	Glenalmond - - -	39	18	31·6	−6·1	1	0·04	?	—	—
8	February 23 -	Sumburgh Head - -	48	37	42·5	+4·0	7	1·72	+1·16	—	—
9	March 1 -	Sumburgh Head - -	47	28	38·0	−0·5	7	2·39	+1·89	—	—
10	„ 8 -	Glenalmond - - -	51	32	40·2	+0·2	6	1·67	?	—	—
„	„ -	Leicester - - - -	57	35	47·7	+5·9	3	0·46	+0·10	—	—
15	April 12 -	Sumburgh Head - -	49	34	43·2	+1·2	2	0·03	−0·38	—	—
17	„ 26 -	Churchstoke - - -	57	35	46·4	−3·6	4	0·24	?	41	41
20	May 17 - -	Shrewsbury - - -	65	30	49·7	−4·3	1	0·05	−0·40	—	—
21	„ 24 - -	Shrewsbury - - -	68	31	51·7	−3·6	0	—	−0·41	—	—
25	June 21 - -	Sumburgh Head - -	63	43	52·7	+0·7	0	—	−0·29	—	—
„	„ - -	Durham - - - -	73	42	55·3	−3·4	3	1·24	+0·79	34	28
„	„ - -	Birmingham, (Oscott) -	72	49	58·6	−2·1	6	0·65	+0·06	—	—
„	„ - -	Llandudno - - -	69	51	59·1	−0·3	4	0·90	?	38	32
„	„ - -	Foynes - - - -	68	48	58·0	−1·0	3	0·36	?	—	—
30	July 26 - -	Barnstaple - - - -	79	55	66·8	+5·7	3	0·83	+0·33	—	—
34	August 23 -	Llandudno - - -	67	55	60·7	+0·7	0	—	?	27	27
37	September 13 -	Durham - - - -	72	39	56·5	−0·4	3	1·82	+1·22	37	41
„	„ -	Llandudno - - -	65	51	58·9	+1·0	4	0·53	?	35	39
43	October 25 -	Llandudno - - -	52	30	41·5	−8·3	2	0·20	?	23	33
44	November 1 -	Barnstaple - - - -	59	29	45·7	−4·3	5	2·96	+1·82	—	—
46	„ 15 -	Shrewsbury - - -	59	22	46·8	+2·6	5	2·01	+1·46	—	—
„	„ „ -	Llandudno - - -	57	31	47·8	+2·8	7	1·91	?	11	18
47	„ 22 -	Shrewsbury - - -	48	15	30·6	−12·1	1	0·05	−0·47	—	—
48	„ 29 -	Shrewsbury - - -	53	25	45·3	+3·2	4	0·51	0·00	—	—
50	December 13 -	Sumburgh Head -	50	32	42·1	+2·0	7	2·26	+1·51	—	—
51	„ 20 -	Sumburgh Head - -	39	21	31·4	−9·7	6	0·55	−0·20	—	—
„	„ „ -	Stornoway - - - -	41	25	33·2	−8·3	5	0·70	−0·69	2	4
52	„ 27 -	Barnstaple - - - -	55	34	45·3	+2·4	5	2·67	+1·67	—	—
	1881.										
53	January 3 -	Shrewsbury - - -	47	29	38·6	−3·4	3	1·29	+0·84	—	—

Q 5404. 150.—3/81. Wt. 26. E. & S.

WEEKLY WEATHER REPORT.

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PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL;
AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 1.] WEEK ENDING MONDAY, JANUARY 5, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE AND RAINFALL IN THE UNITED KINGDOM FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the Stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Yarmouth, Cambridge, Audley End (Saffron Walden), Rothamsted.
4. MIDLAND COUNTIES.—Nottingham, Loughborough, Leicester, Shrewsbury, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Stonyhurst, Manchester, Liverpool Observatory (Bidston), Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Kingstown, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations 1857-69, as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for Week.
Principal Wheat-producing Districts.	1. SCOTLAND, EAST	57	30	40	2 above.	4	4	1 more.
	2. ENGLAND, NORTH-EAST	58	33	43	5 above.	5	3	2 less.
	3. ENGLAND, EAST	59	29	42	3 above.	4	3	3 less.
	4. MIDLAND COUNTIES	56	32	44	4 above.	5	5	2 less.
	5. ENGLAND, SOUTH	57	31	43	2 above.	4	6	1 less.
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	54	34	45	5 above.	7	15	6 more.
	7. ENGLAND, NORTH-WEST	56	31	45	5 above.	4	12	4 more.
	8. ENGLAND, SOUTH-WEST	53	35	46	3 above.	5	7	3 less.
	9. IRELAND, NORTH	56	32	45	4 above.	6	15	?
	10. IRELAND, SOUTH	58	32	47	5 above.	6	11	3 more.

General Remarks.

Weather very dull, unsettled, squally, and rainy during the first part of the period, but afterwards moderately fine; in some parts of England on the 3rd and 4th it was very fine and bright.

Temperature above the mean in all districts, as much as 4° or 5° in excess over the greater part of England and in Ireland, but only 2° in "England, S.," and "Scotland, E."

Wind generally south-westerly all over the kingdom; strong to a gale in several places until January 2nd, when it became moderate or light, except in the W. of Ireland, and continued so during the remainder of the week.

Rainfall more than the mean in Ireland, Scotland, and in "England, N.W.," but less than the mean in all other districts. At most stations the bulk of the fall occurred during the first three days.

The data from which the summary on the preceding page has been calculated are as follow :

Districts.	Names of Stations.	Temperature.				Rainfall.		
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.
		°	°	°	°		Inches.	Inches.
1. SCOTLAND, E.	Nairn	55	30	38·8	+ 0·1	4	0·41	−0·09
	Aberdeen	56	32	39·4	+ 1·7	3	0·23	−0·42
	Glenalmond							
	Leith	57	34	41·4	+ 2·9	6	0·56	+0·16
2. ENGLAND, N.E.	Shields	58	35	43·8	+ 5·3	4	0·17	−0·38
	Durham	54	33	43·3	+ 5·1	2	0·09	−0·51
	York	56	34	43·6	+ 5·6	4	0·44	−0·08
	Spurn Head	53	34	42·3	+ 4·3	4	0·31	?
	Kelstern (Lincolnshire) ℳ	54	34	41·5	+ 3·3	4	0·54	+0·14
3. ENGLAND, E.	Yarmouth	54	31	41·2	+ 2·7	3	0·29	−0·38
	Cambridge	59	29	43·5	+ 5·2	4	0·21	−0·19
	Audley End (Saffron Walden) ℳ							
	Rothamsted	53	32	40·8	+ 1·8	5	0·37	−0·25
4. MIDLAND COUNTIES	Nottingham	56	32	43·3	+ 4·4	3	0·60	−0·07
	Loughborough	55	35	44·7	+ 5·4	3	0·57	+0·02
	Leicester	55	35	43·7	+ 4·4	3	0·51	−0·03
	Shrewsbury ℳ							
	Hereford ℳ	55	35	44·8	+ 4·3	5	0·31	−0·44
	Cirencester	52	32	41·6	+ 1·3	3	0 34	−0·51
	Oxford	53	33	43·2	+ 3·8	4	0·40	−0·16
5. ENGLAND, S.	London	57	32	44·6	+ 4·5	3	0·45	−0·20
	Marlborough ℳ	54	31	42·7	+ 2·1	4	0·70	−0·11
	Strathfield Turgiss ℳ	53	32	41·9	+ 1·4	3	0·73	+0·10
	Dover	49	35	41·6	+ 1·8	4	0·56	−0·24
	Hastings (St. Leonard's)	50	34	42·2	+ 2·5	5	0·52	−0·19
	Hurst Castle	47	36	43·4	+ 1·9	3	0·51	?
6. SCOTLAND, W.	Laudale (Loch Sunart)							
	Glasgow	54	34	44·3	+ 5·7	7	1·36	+0·71
	Ardrossan	51	36	44·1	+ 4·5	7	1·70	+0·64
	Silloth (Cumberland)	51	34	44·2	+ 5·2	7	1·74	+0·80
	Douglas (Isle of Man)	54	36	45·6	+ 4·4	6	1·19	+0·10
7. ENGLAND, N.W.	Stonyhurst	52	34	43·3	+ 3·8	6	2·78	+1·71
	Manchester	53	31	44·0	+ 5·4	3	0·75	0·00
	Liverpool Observatory (Bidston)	56	35	45·3	+ 4·8	4	0·79	+0·28
	Holyhead	52	38	46·3	+ 3·9	4	0·50	−0·46
8. ENGLAND, S.W.	Pembroke	51	37	46·3	+ 3·9	6	0·55	−0·51
	Barnstaple							
	Falmouth	53	40	47·1	+ 2·0	5	1·00	+0·02
	Plymouth	53	37	45·9	+ 2·3	5	0·58	−0·50
	Prawle Point	52	35	45·7	+ 1·7	4	0·80	?
9. IRELAND, N.	Londonderry	55	33	44·2	+ 3·2	6	1·61	+0·66
	Mullaghmore	56	35	46·2	+ 5·2	6	2·05	?
	Markree Castle	55	32	44·5	+ 3·3	6	1·21	?
	Brookeborough	54	33	44·2	+ 4·0	6	2·13	?
	Armagh	54	33	44·5	+ 3·4	6	1·26	+0·57
	Donaghadee	55	34	43·9	+ 2·9	6	0·67	?
10. IRELAND, S.	Dublin	57	34	46·9	+ 5·2	4	0·61	+0·01
	Kingstown	58	32	47·0	+ 5·1	6	0·54	−0·17
	Parsonstown	57	34	46·0	+ 5 4	6	1·13	+0·34
	Roche's Point	55	36	46·4	+ 3·4	7	2·15	+0·73
	Valentia	56	37	48·7	+ 5·4	7	1·42	+0·42
	Foynes	56	36	48·0	+ 6·0	5	0·53	?
SCOTLAND, N.	Sumburgh Head	51	32	41·9	+ 2·2	7	1·19	+0·49
	Stornoway	53	33	41·1	+ 1·1	6	1·09	−0·24
	Wick	52	31	39·5	0·0	6	0·50	−0·12
——	Scilly (St. Mary's)	54	42	49·4	+ 3·1	7	0·81	−0·27
	Jersey (Noirmont)	50	36	43·7	− 0·8	6	0·23	−0·53

The observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.
The stations marked with "ℳ" are in connection with the Meteorological Society.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending January 5, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, December 30.

Weather fine over the N. of France and the eastern parts of Great Britain and Ireland, dull elsewhere, with rain in W. Ireland and thunder at Prawle Point. Heavy showers and squalls during day, with thunder and lightning.

Temperature fallen a few degrees everywhere, ranging over these Islands from 49° at Scilly to 36° at Nairn. Little change during day generally, but sharp fall in S.E. in evening.

Wind westerly over Ireland, south-westerly to southerly on the French and our other coasts; strong generally, and blowing severe gale in W. and S.W. Fresh to strong gale on most coasts during day and following night.

Sea high S.W., rough, except in N.E.

Barometer falling everywhere—briskly over these Islands. Deep depression advancing to W. of Scotland from Atlantic and gradients very steep over Ireland and England. Depression passing north-eastward later.

Wednesday, December 31.

Weather fine N.E. Scotland, the S.E. of France, and at Christiansund; rainy, misty, and dull generally. Squally and wet all day on most coasts.

Temperature fallen in N., risen elsewhere—quickly in W. Readings ranging from 52° in S. Ireland to 32° at Nairn. Maxima between 50° and 55°, except in N. Scotland and on the S. coast of England.

Wind westerly in the W., south-westerly to southerly elsewhere, blowing a gale at Scilly and Cape Gris Nez at 8 A.M. and at Jersey later in the day. Strong generally.

Sea high S.W., as well as at Toulon and the Scaw, rough, except in the N.

Barometer rising slowly generally, but falling briskly in W. Highest S. France, with large depression N. Sweden and second disturbance off W. Scotland. Falling E., rising W., later.

Thursday, January 1, 1880.

Weather dull generally, with rain on our northern and western coasts and over the Netherlands. Mist and fog in many places. Sky cloudy or overcast all day with rain in N.

Temperature fallen very fast over Gulf of Bothnia, risen elsewhere—quickly in N. Readings high generally, ranging from 54° over central England to 45° at Aberdeen. Maxima between 50° and 58°.

Wind northerly over nearly the whole of these Islands and France, but southerly in N.E. Scotland and over Scandinavia. Fresh or moderate gales in W. and S.W. and wind strong generally. Fresh gale on most coasts at night.

Sea high in S.W. and rough except N.

Barometer falling on our N.W. coasts, but rising in other parts of our area. Highest over S.W. France, with depression near Hebrides. Fresh fall occurring in W. later and spreading over us.

Friday, January 2.

Weather fine at many western and north-eastern stations, cloudy, dull, or misty elsewhere, with hail at Stornoway. Rain in many places later, with slight thunderstorms in the N. and W.

Temperature unchanged over France, higher over Scandinavia and lower over these Islands. Readings ranging from 50° at Scilly to 37° in N. Scotland. Maxima about 55° in W. Ireland and 52° in S.E. England.

Wind westerly on nearly all coasts; strong generally, with gale in N. Gale in N. and N.W. all day.

Sea rough in most places and high in S.W. and N.

Barometer rising quickly in W. and slightly generally, but falling briskly over Norway. Large depression off Norwegian coast passing north-eastward, and barometer rising all day.

(*Continued over.*)

(*Continued.*)

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, January 3.

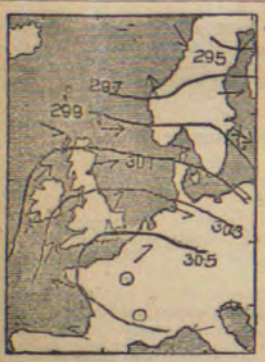
Weather fine in nearly all parts of these Islands and their neighbourhood, but dull in the S. of France and on our extreme W. coasts. Rain at Ardrossan. Fine in E. and S.E. all day.

Temperature risen on our northern and western coasts, fallen elsewhere. Readings ranging from 48° in the S.W. to 57° in the S.E. Maxima rather above 50° in the S.W. and in London, between 45° and 50° elsewhere.

Wind westerly in nearly all places, but south-westerly in the W. of Ireland, and north-westerly in the Shetlands. Fresh in force very generally, and blowing a gale in Norway. Wind backing in Ireland and veering in Norway later.

Sea high in S.W. and round the Shetlands, rough off the Norwegian coast.

Barometer falling over Sweden and Denmark, risen elsewhere—quickly Scotland. Readings highest France and lowest N. Norway. Falling on our western coasts during day, but rising very fast in Norway.



Sunday, January 4.

Weather fine over nearly the whole of Great Britain and Holland, cloudy or dull in most other places, with rain in Ireland. Fog prevailing at several stations. Fine all day in E., but rain in W. and S.W.

Temperature risen except over France and the E. of England. Readings ranging from 50° at Scilly to 33° at Cambridge and 40° at Stornoway. Maxima a little above 50° at Scilly and in S. Ireland, between 45° and 50° elsewhere.

Wind easterly over France, southerly over the Channel and greater part of England and Ireland, westerly over Scotland and the North Sea. Strong in force in S.W., moderate generally. Falling light during day.

Sea rough off S. Ireland and the Shetland Isles.

Barometer falling in S.W., rising generally. Anticyclone over central France, with depressions off W. Ireland and the N. of Norway. Pressure increasing in W. and N. later.

Monday, January 5.

Weather fine in parts of Scotland and the N. of England, dull generally, with some rain in the W. and S.W. and fog in the S.E. Showers in Scotland and Ireland later.

Temperature risen a few degrees in most places and readings ranging from 50° at Scilly to 44° at Wick and 34° at London. Maxima rather above 50° in S.W., between 45° and 50° elsewhere.

Wind easterly over the Bay of Biscay, southerly on most of our coasts, and westerly to north-westerly over Scandinavia. Blowing strongly at Scilly and freshly in the S.W. The easterly wind over France extending to the Channel later.

Sea rough S.W., N.W., and off Christiansund.

Barometer falling over Scotland, rising in all other places—quickly over Scandinavia. Pressure still highest over France and low over Scandinavia and the Baltic. Pressure increasing slowly, except in the N. during day.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟹ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

METEOROLOGICAL OFFICE,
116, VICTORIA STREET, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

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2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Yarmouth, Cambridge, Audley End (Saffron Walden), Rothamsted.
4. MIDLAND COUNTIES.—Nottingham, Loughborough, Leicester, Shrewsbury, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Stonyhurst, Manchester, Liverpool Observatory (Bidston), Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
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	Districts.	Temperature. (In degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for Week.
Principal Wheat-producing Districts.	1. SCOTLAND, EAST	51	25	38	0 (average).	1	less than $\frac{1}{2}$	1 less.
	2. ENGLAND, NORTH-EAST	50	26	37	1 below.	1	less than $\frac{1}{2}$	5 less.
	3. ENGLAND, EAST	39	28	34	4 below.	2	less than $\frac{1}{2}$	6 less.
	4. MIDLAND COUNTIES	44	28	35	4 below.	1	less than $\frac{1}{2}$	6 less.
	5. ENGLAND, SOUTH	41	28	35	5 below.	1	less than $\frac{1}{2}$	7 less.
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	51	28	40	1 above.	1	1	11 less.
	7. ENGLAND, NORTH-WEST	49	27	38	2 below.	1	less than $\frac{1}{2}$	8 less.
	8. ENGLAND, SOUTH-WEST	49	32	39	4 below.	1	2	10 less.
	9. IRELAND, NORTH	53	33	42	1 above.	1	less than $\frac{1}{2}$	?
	10. IRELAND, SOUTH	52	32	43	1 above.	1	less than $\frac{1}{2}$	10 less.

General Remarks.

Weather during this period has been very dry generally, but exceedingly dull and gloomy over England, rather so in Ireland, and at times in Scotland also.

Temperature slightly above the mean in Ireland and the greater part of Scotland, but as much as 4° or 5° below the mean in nearly all other districts. In most places the highest of the maximum readings occurred at the commencement of the period and the lowest of the minima at its close.

Wind generally anticyclonic; being light from E. and S.E. in the S., light to moderate or fresh from S. and S.W. in the W., and light to moderate from S.W. and W. in the N. At our central and eastern stations calms and variable airs were experienced.

Rainfall exceedingly slight in all districts.

The data from which the summary on the preceding page has been calculated are as follow :

Districts.	Names of Stations.	Temperature.				Rainfall.		
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.
		°	°	°	°		Inches.	Inches.
1. SCOTLAND, E.	Nairn	46	25	36·7	− 1·5	1	0·05	−0·49
	Aberdeen	48	28	37·6	+ 0·5	2	0·02	−0·53
	Glenalmond	47	26	37·5	− 0·3	1	0·04	?
	Leith	51	25	37·6	− 0·5	0	—	−0·41
2. ENGLAND, N.E.	Shields	50	29	38·9	+ 1·0	0	—	−0·50
	Durham	47	26	35·8	− 2·0	1	0·02	−0·51
	York	48	31	38·3	+ 0·3	1	0·02	−0·46
	Spurn Head	45	30	37·0	− 1·0	0	—	?
	Kelstern (Lincolnshire) ℳ	41	28	34·9	− 2·8	0	—	−0·50
3. ENGLAND, E.	Yarmouth	39	32	35·3	− 2·3	0	—	−0·62
	Cambridge	39	28	33·8	− 4·2	2	0·02	−0·48
	Audley End (Saffron Walden) ℳ							
	Rothamsted	37	28	32·9	− 5·7	5	0·05	−0·65
4. MIDLAND COUNTIES	Nottingham	43	30	35·5	− 2·8	2	0·06	−0·50
	Loughborough	41	30	35·8	− 2·8	1	0·02	−0·54
	Leicester	41	29	35·0	− 3·7	2	0·02	−0·52
	Shrewsbury ℳ							
	Hereford ℳ	44	29	35·3	− 4·7	0	—	−0·77
	Cirencester	41	30	34·4	− 5·4	0	—	−0·90
	Oxford	38	28	33·2	− 5·8	3	0·03	−0·55
5. ENGLAND, S.	London	40	29	34·2	− 5·2	2	0·02	−0·60
	Marlborough ℳ	39	28	33·3	− 6·8	1	0·01	−0·81
	Strathfield Turgiss ℳ	38	28	33·0	− 7·0	0	—	−0·70
	Dover	41	30	35·3	− 3·7	2	0·03	−0·77
	Hastings (St. Leonard's)	40	30	35·0	− 4·0	0	—	−0·73
	Hurst Castle	41	32	36·9	− 4·2	2	0·04	?
6. SCOTLAND, W.	Laudale (Loch Sunart)							
	Glasgow	48	30	40·3	+ 2·3	1	0·13	−1·08
	Ardrossan	47	30	40·5	+ 1·5	1	0·02	−1·11
	Silloth (Cumberland)	47	28	38·7	+ 0·1	1	0·03	−0·87
	Douglas (Isle of Man)	51	33	40·6	− 0·1	1	0·02	−1·26
7. ENGLAND, N.W.	Stonyhurst	44	28	36·6	− 2·3	1	0·03	−1·02
	Manchester	45	27	36·3	− 1·8	1	0·06	−0·69
	Liverpool Observatory (Bidston)	49	30	36·9	− 3·1	0	—	−0·55
	Holyhead	48	32	40·4	− 1·6	0	—	−0·95
8. ENGLAND, S.W.	Pembroke	46	33	39·1	− 2·9	0	—	−1·11
	Barnstaple	48	32	38·9	− 3·1	1	0·21	−0·89
	Falmouth	49	35	41·0	− 3·5	1	0·01	−0·97
	Plymouth	45	33	39·5	− 3·5	1	0·31	−0·84
	Prawle Point	48	33	38·6	− 4·8	1	0·49	?
9. IRELAND, N.	Londonderry	52	33	41·5	+ 0·1	1	0·05	−0·94
	Mullaghmore	53	36	42·9	+ 2·2	0	—	?
	Markree Castle	51	34	41·4	+ 0·1	0	—	?
	Brookeborough	50	34	40·7	+ 1·2	0	—	?
	Armagh	49	35	41·6	+ 1·1	0	—	−0·71
	Donaghadee	51	35	42·2	+ 1·6	0	—	?
10. IRELAND, S.	Dublin	49	32	40·6	− 0·6	0	—	−0·61
	Kingstown	51	35	42·2	+ 0·8	2	0·02	−0·70
	Parsonstown	50	35	40·5	+ 0·5	0	—	−0·82
	Roche's Point	51	40	45·0	+ 2·2	1	0·01	−1·42
	Valentia	52	40	45·9	+ 2·8	2	0·07	−1·58
	Foynes	49	34	40·5	− 1·0	1	0·01	?
SCOTLAND, N.	Sumburgh Head	47	35	41·3	+ 2·0	1	0·02	−0·68
	Stornoway	48	37	42·2	+ 2·6	0	—	−1·30
	Wick	44	27	37·6	− 1·4	1	0·01	−0·52
——	Scilly (St. Mary's)	52	38	43·0	− 3·0	1	0·04	−1·09
	Jersey (Noirmont)	38	28	32·7	−10·9	1	0·08	−0·69

The observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.
The stations marked with "ℳ" are in connection with the Meteorological Society.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE during the Week ending January 12, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, January 6.

Weather fine at Yarmouth, Cape Gris Nez, and Brussels, cloudy or dull generally, with rain over Norway, and fog or mist over these Islands. Weather foggy but dry all day.

Temperature changes rather irregular, but thermometer generally rather lower than on previous day. Readings ranging from 50° in W. Ireland to 32° at Cambridge and Jersey. Rather cold night.

Wind easterly over France and our S. coast, southerly on most of our other coasts, but westerly in the Shetlands and over the North Sea. Light or moderate in force. No change of importance during day.

Sea moderate to smooth except at Spurn Head and off Christiansund.

Barometer falling in Scandinavia, rising elsewhere. Large anticyclone over southern England, France, and central Europe, and a slight depression off the N.W. coast of Norway. Pressure increasing everywhere during day.

Wednesday, January 7.

Weather very fine over Scandinavia, Denmark, N. Germany, and the S. of France, dull and foggy or misty elsewhere. Dull weather but no rain all day.

Temperature fallen in most places and readings ranging from 50° at Valentia to 34° over central England. Mild all day, except over the S. of England and the Channel. At Jersey the maximum was only 32°.

Wind easterly over France but southerly on most of our coasts, moderate or fresh in the W., very light in the E. Scarcely any change later.

Sea rough in the S.W. and off Christiansund.

Barometer rising everywhere. Readings high and uniform over these Islands and France, with moderate gradients over Scandinavia. Barometer rising slowly in most places all day, but slight decrease appearing at Christiansund.

Thursday, January 8.

Weather dull generally with thick mist and fog in many places, and rain at Christiansund and Hernosand. Weather dull, misty, and gloomy all day, except in the E. of Scotland.

Temperature fallen except in Norway and Sweden. Readings ranging over these Islands from 47° in the Shetlands to 31° in the Channel Islands. Weather again cold all day in the S.

Wind easterly in the S., southerly in the W., and westerly in the N. and over the North Sea, blowing strongly at some Scandinavian stations, but light or moderate generally.

Sea moderate to calm, except off Christiansund.

Barometer falling everywhere—briskly in Scandinavia. Large depression over Gulf of Bothnia, and readings highest over N. Germany. Barometer falling slowly all day and readings very uniform.

Friday, January 9.

Weather clear in the N.E. of Scotland and extreme S. of France, dull, cloudy, or misty generally. Dull in most places during day with gloom and drizzling rain in the S.

Temperature slightly higher on our S.W. coasts, several degrees lower elsewhere. Readings ranging from 45° at Scilly, to 29° at Oxford and 30° at Nairn. Rather cold all day.

Wind easterly over France, southerly on most of our coasts, and north-westerly on the eastern shores of the North Sea. Moderate or light except in the extreme W. Increasing to a strong breeze over the Bay of Biscay and our western coasts later.

Sea rough at Stornoway and Christiansund.

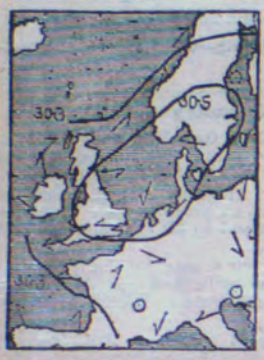
Barometer rising briskly in Scandinavia, falling elsewhere. Large anticyclone over England and northern and central France. Brisk fall over the Bay of Biscay later.

(*Continued over.*)

(*Continued.*)

Synoptic Weather Charts.—8 a.m.

Barometer and Wind.	Cloud, Rain, Sea, and Temperature.	**Weather** during the 24 hours succeeding the date of the Charts.



Saturday, January 10.

Weather still moderately fine in E. Scotland, but dull, foggy, and misty elsewhere. Scarcely any change later, but slight drizzle in S. at night.

Temperature rather higher at the north-western and south-eastern stations, lower elsewhere. Readings ranging from 46° at Valentia, to 28° at Aberdeen and 32° over Central England. Temperature rather low all day.

Wind still easterly over France and the Channel, southerly on most of our coasts, and northerly over Scandinavia and Denmark. Fresh or strong in the S.W. and over France, light or moderate elsewhere.

Sea rough off Scilly and Rochefort.

Barometer falling slightly over France, rising elsewhere,—briskly over Scandinavia. Large area of high pressure still shown over the S. of Sweden and Norway, the North Sea, and England. Mercury rising slowly all day.

Sunday, January 11.

Weather very fine over N. Germany and the Netherlands, cloudy or dull generally, with mist or fog in several places, and rain at Rochefort. Dull in most places all day, but no rain.

Temperature fallen a little on our western coasts, and briskly in Holland, risen in most other places. Readings ranging from 45° in S. Ireland, to 35° at Yarmouth, and 30° at Nairn. Weather cold all day.

Wind easterly over France and the greater part of England, south-easterly to southerly in Ireland, and south-westerly to southerly in Scotland. Fresh or strong on our S.W. and W. coasts, light or moderate elsewhere. No change later.

Sea rough in the S.W. and at Stornoway.

Barometer rising over the whole of western Europe. The anticyclone still shown in the same position, with comparatively low readings over Spain and N. Sweden. Scarcely any change later.

Monday, January 12.

Weather still very fine over the Netherlands and N.E. France, cloudy or dull generally. Weather dry, no rain falling in any part of western Europe, except S. Ireland and N.W. France, and sky clearing considerably in S.E. during morning.

Temperature fallen a few degrees in nearly all places, and rather low generally, ranging from 45° at Valentia to 25° at Nairn and 33° in London. Sharp frost over France. Cold day again.

Wind easterly over France, easterly to south-easterly over England and Ireland, and south-westerly over Scotland. Light or moderate, except in the S.W. and over the Bay of Biscay. Light breezes from the same quarters all day.

Sea moderate to smooth.

Barometer rising very slowly over these Islands and France, and falling in the countries to the eastward of the North Sea. The changes during day again exceedingly slight.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

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WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL: AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 3.] WEEK ENDING MONDAY, JANUARY 19, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE AND RAINFALL IN THE UNITED KINGDOM FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the Stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Yarmouth, Cambridge, Audley End (Saffron Walden), Rothamsted.
4. MIDLAND COUNTIES.—Nottingham, Loughborough, Leicester, Shrewsbury, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Stonyhurst, Manchester, Liverpool Observatory (Bidston), Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Kingstown, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations 1857-69, as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for Week.
Principal Wheat-producing Districts.	1. SCOTLAND, EAST	41	24	34	4 below.	5	5	1 less.
	2. ENGLAND, NORTH-EAST	41	17	32	6 below.	3	2	2 less.
	3. ENGLAND, EAST	42	19	32	6 below.	2	2	4 less.
	4. MIDLAND COUNTIES	44	13	33	6 below.	3	4	2 less.
	5. ENGLAND, SOUTH	40	17	32	7 below.	3	4	4 less.
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	46	24	34	5 below.	3	3	9 less.
	7. ENGLAND, NORTH-WEST	45	22	34	5 below.	3	4	4 less.
	8. ENGLAND, SOUTH-WEST	47	26	38	5 below.	2	4	7 less.
	9. IRELAND, NORTH	47	26	37	3 below.	4	6	2 less.
	10. IRELAND, SOUTH	48	26	37	4 below.	4	4	5 less.

General Remarks.

Weather fine generally in Ireland and Scotland; dull, gloomy, and misty over England until the 16th, when it became fine and bright there also.

Temperature again below the mean for the time of year in all districts; over the greater part of England the deficit ranged from 5° to 7°, and elsewhere from 3° to 4°. The thermometer was highest on the 16th, but subsequently fell quickly, the lowest of the minimum readings (13° at Shrewsbury) being registered on the 19th.

Wind variable between N.W. and N.E. during the first five days, but on the 18th a moderate easterly breeze set in over the greater part of the kingdom and continued till the close of the period.

Rainfall again much less than the mean in all districts.

The data from which the summary on the preceding page has been calculated are as follow :

Districts.	Names of Stations.	Temperature.				Rainfall.		
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.
		°	°	°	°		Inches.	Inches.
1. SCOTLAND, E.	Nairn	38	24	32·9	− 5·1	5	0·62	+0·07
	Aberdeen	40	26	34·5	− 2·5	5	0·61	−0·03
	Glenalmond							
	Leith	41	24	33·7	− 4·1	4	0·25	−0·21
2. ENGLAND, N.E.	Shields	41	26	33·5	− 4·1	4	0·36	−0·09
	Durham	37	17	29·6	− 7·9	3	0·48	+0·03
	York	39	24	31·5	− 6·2	3	0·16	−0·28
	Spurn Head	39	28	34·0	− 3·4	1	0·01	?
	Kelstern (Lincolnshire) ℜ	37	24	30·8	− 6·7	3	0·07	−0·33
3. ENGLAND, E.	Yarmouth	37	25	32·2	− 5·2	1	0·02	−0·58
	Cambridge	42	21	31·9	− 6·1	3	0·15	−0·31
	Audley End (Saffron Walden) ℜ							
	Rothamsted	37	19	31·5	− 7·1	3	0·39	−0·31
4. MIDLAND COUNTIES	Nottingham	41	23	32·0	− 6·0	3	0·31	−0·14
	Loughborough	41	21	32·8	− 5·5	2	0·25	−0·30
	Leicester	44	25	33·4	− 5·0	3	0·31	−0·20
	Shrewsbury ℜ	42	13	33·1	− 6·1	3	0·45	+0·03
	Hereford ℜ	42	23	33·6	− 6·2	3	0·48	−0·28
	Cirencester	40	21	31·0	− 8·6	3	0·72	−0·21
	Oxford	40	23	31·4	− 7·6	4	0·44	−0·16
5. ENGLAND, S.	London	40	23	32·4	− 6·1	3	0·34	−0·26
	Marlborough ℜ	39	17	30·2	− 9·7	3	0·41	−0·44
	Strathfield Turgiss ℜ	39	20	30·9	− 8·8	3	0·54	−0·19
	Dover	38	28	32·9	− 5·6	3	0·09	−0·71
	Hastings (St. Leonard's)	39	24	33·2	− 5·3	4	0·29	−0·46
	Hurst Castle	40	27	34·0	− 6·6	3	0·74	?
6. SCOTLAND, W.	Laudale (Loch Sunart)							
	Glasgow	44	25	33·2	− 4·8	4	0·13	−1·12
	Ardrossan	46	27	34·7	− 3·9	3	0·11	−1·09
	Silloth (Cumberland)	41	24	31·2	− 7·3	3	0·40	−0·32
	Douglas (Isle of Man)	44	29	36·1	− 4·5	3	0·39	−0·90
7. ENGLAND, N.W.	Stonyhurst	40	22	31·4	− 7·2	4	0·35	−0·68
	Manchester	41	24	31·6	− 6·1	2	0·22	−0·51
	Liverpool Observatory (Bidston)	43	28	34·5	− 5·1	3	0·44	−0·14
	Holyhead	45	33	38·5	− 3·2	4	0·59	−0·36
8. ENGLAND, S.W.	Pembroke	46	32	38·0	− 3·8	2	0·38	−0·77
	Barnstaple	47	26	36·9	− 4·7	1	0·25	−0·87
	Falmouth	45	31	39·4	− 3·3	3	0·64	−0·53
	Plymouth	44	29	36·9	− 6·1	2	0·27	−0·73
	Prawle Point	44	31	36·9	− 6·1	3	0·46	?
9. IRELAND, N.	Londonderry	46	26	36·4	− 3·4	5	0·72	−0·28
	Mullaghmore	47	32	38·7	− 1·8	4	0·75	?
	Markree Castle	47	26	35·8	− 4·6	4	0·53	−0·25
	Brookeborough	46	27	36·1	− 2·9	3	0·73	?
	Armagh	44	29	36·2	− 3·8	3	0·61	−0·12
	Donaghadee	45	31	38·4	− 2·1	4	0·33	?
10. IRELAND, S.	Dublin	43	30	36·6	− 4·6	4	0·37	−0·23
	Kingstown	44	30	37·0	− 4·2	5	0·36	−0·34
	Parsonstown	44	26	33·7	− 5·8	2	0·21	−0·62
	Roche's Point	48	31	38·5	− 4·0	3	0·43	−0·09
	Valentia	47	30	39·6	− 3·4	3	0·58	−1·14
	Foynes	48	27	37·4	− 3·6	4	0·21	?
SCOTLAND, N.	Sumburgh Head	45	30	35·8	− 3·7	6	1·41	+0·74
	Stornoway	42	29	36·6	− 2·7	4	0·54	−0·76
	Wick	47	24	34·7	− 3·7	6	0·67	+0·21
——	Scilly (St. Mary's)	49	39	43·2	− 2·3	3	0·27	−0·90
	Jersey (Noirmont)	46	29	38·0	− 5·2	4	0·93	−0·85

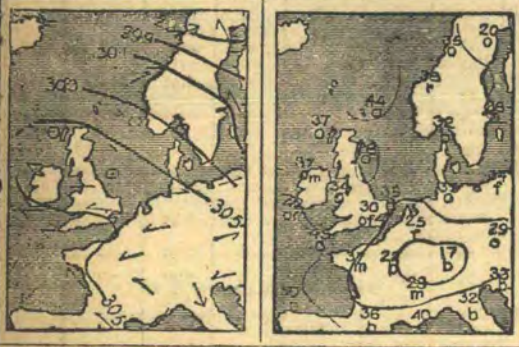
The observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.
The stations marked with "ℜ" are in connection with the Meteorological Society.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE during the Week ending January 19, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.



Tuesday, January 13.

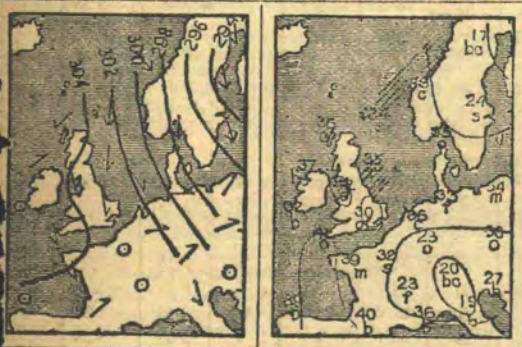
Weather fine over the N.E. of France, the Netherlands, and at Dover, cloudy or dull in nearly all other places, with rain in the S.W. and a good deal of fog or mist. Sleet in the N. and S. later.

Temperature fallen a few degrees generally. Readings ranging from 45° at Scilly and 44° in the Shetlands to 28° at Aberdeen and 30° in London. Maxima generally between 35° and 45° and minima between 25° and 35°.

Wind easterly over France and our southern stations, westerly in the N. and over Scandinavia. Moderate or light in force generally but blowing a gale at Bodö. Wind veering to N.W. in the N.

Sea moderate to smooth.

Barometer falling except in France and W. Ireland. Large depression over N. Norway. Disturbance moving eastward over the Gulf of Bothnia later and pressure giving way slowly all day.



Wednesday, January 14.

Weather fine at several western stations and in S. France, cloudy or dull and misty generally, with rain at Shields, and snow at Paris and Skudesnaes. Heavy snow subsequently in N. and slight rain in different places.

Temperature changed irregularly, lower in the S.E. and S.W. and over Scandinavia, higher elsewhere; ranging from 42° at Scilly to 28° at Nottingham. Maxima again between 35° and 45° and minima between 25° and 35°.

Wind variable over France, northerly elsewhere, light or moderate on our coasts but blowing a fresh gale over Scandinavia. No change during day.

Sea rough at Prawle Point, moderate or slight elsewhere.

Barometer falling everywhere, quickly over Norway and Sweden and briskly on our eastern coast. Large depression over the Gulf of Bothnia and readings highest over Ireland. Slight recovery in pressure during day.

Thursday, January 15.

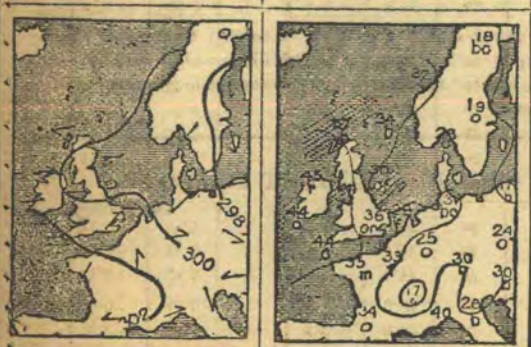
Weather fine at most of our more northern and western stations, but dull over central and eastern England. Snow or drizzling rain falling at all but our south-western stations later.

Temperature risen on our N.W. coasts and over France, fallen in Scandinavia, changed irregularly elsewhere. Readings ranging from about 40° in the extreme W. to 39° at Hurst Castle. Rather cold day.

Wind westerly to north-westerly or northerly on all coasts; blowing lightly or moderately over these Islands and France, but strongly in parts of Scandinavia. Little change during day.

Sea moderate to smooth.

Barometer falling, except in Scandinavia. Large area of high pressure extending from our western coasts southward to the north of Spain. Barometer falling all day and small depression passing from N. to S. over these Islands.



Friday, January 16.

Weather dull and unsettled over the whole Kingdom, with rain or fog at several stations. Sky clearing in N. and W. later, but rain falling all day in England.

Temperature fallen over the greater part of the Continent and on the E. coast of England, risen at most of our stations. Readings ranging from 45° at Mullaghmore to 29° at Yarmouth. Rather brisk fall in the N. at night.

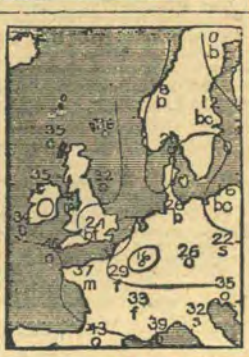
Wind westerly to north-westerly over Ireland and England, and easterly over Norway and the N. of Scotland. Generally moderate in force. Wind shifting to N. in the N. and N.W. later, still westerly elsewhere.

Sea rough at Stornoway, Spurn Head, and Kingstown.

Barometer rising in the Shetlands, falling in nearly all other places; well marked depression lying over the S. and E. of Scotland. Disturbance subsequently moving south-eastward, and recovery commencing in Scotland.

(*Continued over.*)

(Continued.)

Synoptic Weather Charts.—8 a.m.		**Weather** during the 24 hours succeeding the date of the Charts.
Barometer and Wind.	Cloud, Rain, Sea, and Temperature.	
		Saturday, January 17. *Weather* generally moderately fine, but rain and overcast skies reported from our northern and south-western coasts. Sky moderately clear throughout, but slight rain occurring for a short time, except in the S. *Temperature* risen over France, fallen considerably at most of our stations and over Sweden. Frost in S.E.; readings ranging from 44° at Scilly, to 29° over central England. Day cold generally. *Wind* still northerly on most coasts, but westerly at the entrance to the Channel, and variable over Holland. Fresh in force in the S.W., light or moderate elsewhere. Northerly breezes all day. *Sea* rough in the S.W. *Barometer* rising in most places, but falling over Norway and Sweden, and our S.W. coasts. Small depression near Scilly, highest readings over Ireland. Barometer falling everywhere during day, but relative distribution changing very little.
		**Sunday, January 18.** *Weather* showery in the N. and at Cork, generally fine and quiet elsewhere. Slight snow falling at a few places during day, but continuing moderately fine at most stations. *Temperature* fallen considerably except in S. France; readings ranging over these Islands from 40° at Scilly to 23° at Cambridge. Sharp frost all day and following night. *Wind* northerly (N.W. to N.E.) on most of our coasts, but very variable in the inland districts. Light or moderate at most stations. Strong easterly wind springing up on our E. coast later. *Sea* moderate to smooth. *Barometer* rising fast over Scandinavia, falling slowly over these Islands. Readings highest over Norway, lowest over W. France. Pressure recovering briskly in the N. later.
		Monday, January 19. *Weather* cloudy or dull in S.W. France and at a few of our western stations; generally fine and bright. Fine and dry all day, the only rain or snow reported being a few hundredths in the extreme N. *Temperature* fallen fast over the eastern and central parts of Great Britain and France, risen a little elsewhere. Sharp frost E.; readings ranging from 44° at Scilly to 22° at Cambridge. Following night exceedingly cold. *Wind* easterly in most parts of the Kingdom, but south-westerly in Scotland and Norway. Fresh or strong in force over France, the Channel, and S. of England. Little change during day but gale springing up at Scilly. *Sea* rough in the S.W., as well as at Kingstown and at the mouth of the Humber. *Barometer* rising briskly in almost all parts of western Europe, but inclined to fall in the S.W. of France. Large anticyclone lying over the North Sea and our northern stations. Pressure increasing all day.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⇉ = a heavy gale; ⇢ = a gale; → = a fresh to strong breeze; → = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

(Signed) ROBERT H. SCOTT,
Secretary.

Meteorological Office,
116, Victoria Street, S.W.

LONDON: Printed by George E. Eyre and William Spottiswoode,
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WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL;
AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 4.] WEEK ENDING MONDAY, JANUARY 26, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE AND RAINFALL IN THE UNITED KINGDOM FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the Stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Yarmouth, Cambridge, Audley End (Saffron Walden), Rothamsted.
4. MIDLAND COUNTIES.—Nottingham, Loughborough, Leicester, Shrewsbury, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Stonyhurst, Manchester, Liverpool Observatory (Bidston), Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Kingstown, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations 1857-69, as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for Week.
Principal Wheat-producing Districts.	1. SCOTLAND, EAST	45	20	34	3 below.	1	less than ¼	5 less.
	2. ENGLAND, NORTH-EAST	42	20	32	6 below.	1	less than ¼	4 less.
	3. ENGLAND, EAST	40	17	31	8 below.	2	less than ½	5 less.
	4. MIDLAND COUNTIES	42	13	29	10 below.	0	—	6 less.
	5. ENGLAND, SOUTH	40	13	30	9 below.	1	less than ½	7 less.
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	42	19	33	6 below.	1	1	11 less.
	7. ENGLAND, NORTH-WEST	42	19	31	8 below.	0	—	8 less.
	8. ENGLAND, SOUTH-WEST	43	20	35	10 below.	0	—	11 less.
	9. IRELAND, NORTH	44	13	31	10 below.	1	less than ½	8 less.
	10. IRELAND, SOUTH	49	19	35	7 below.	1	3	7 less.

General Remarks.

Weather during this period has been very dry, and the sky, on the whole, moderately clear in nearly all parts of our islands; in Ireland, however, it had become dull, squally, and rainy by the 24th; haze or fog prevailed at many of our south-eastern stations.

Temperature 3° below the mean for the time of year in "Scotland, E.," 6° below in "England, N.E.," and "Scotland, W.," and as much as from 7° to 10° below in all other districts. Over the inland parts of England the lowest of the minimum readings were registered at most stations on the 20th, but a second very low reading was observed in some places on the 26th. Over Great Britain the highest of the maxima occurred on the 22nd, but in Ireland the mildest days were at the close of the week.

Wind during the greater part of this period has been generally light from E. in the S., light to moderate or fresh from S.E. and S. in the W., and light from W. to N.W. in the N. and E. By the 24th, however, south-easterly to southerly winds had appeared over all parts of the country, and, though light in most places, blew with the force of a strong breeze or moderate to fresh gale at some of the more exposed stations in the W. and N.

Rainfall, except in "Ireland, S.," scarcely appreciable.

The data from which the summary on the preceding page has been calculated are as follow .

Districts.	Names of Stations.	Temperature.				Rainfall.		
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.
		°	°	°	°		Inches.	Inches.
1. SCOTLAND, E.	Nairn	45	24	36·7	− 1·4	2	0·04	−0·46
	Aberdeen	41	26	35·1	− 1·9	1	0·01	−0·60
	Glenalmond	44	20	32·0	− 5·8	1	0·05	?
	Leith	41	24	33·3	− 4·5	0	—	−0·46
2. ENGLAND, N.E.	Shields	42	23	32·2	− 5·4	1	0·03	−0·38
	Durham	38	20	30·5	− 7·2	0	—	−0·40
	York	40	20	31·5	− 6·5	0	—	−0·40
	Spurn Head	40	28	33·5	− 4·5	1	0·05	?
	Kelstern (Lincolnshire) ℳ	40	23	30·6	− 7·2	1	0·05	−0·35
3. ENGLAND, E.	Yarmouth	40	25	32·7	− 5·1	2	0·06	−0·53
	Cambridge	40	17	30·8	− 7·6	1	0·02	−0·32
	Audley End (Saffron Walden) ℳ							
	Rothamsted	37	17	29·3	− 9·7	2	0·03	−0·63
4. MIDLAND COUNTIES	Nottingham	41	13	29·5	− 8·8	0	—	−0·40
	Loughborough	40	17	31·1	− 7·4	0	—	−0·54
	Leicester	40	19	31·5	− 7·0	0	—	−0·50
	Shrewsbury ℳ	38	13	26·2	−13·8	0	—	−0·45
	Hereford ℳ	40	15	28·5	−11·6	0	—	−0·72
	Cirencester	42	14	28·8	−10·2	0	—	−0·88
	Oxford	38	16	28·4	−10·8	0	—	−0·56
5. ENGLAND, S.	London	39	17	29·1	− 9·9	0	—	−0·55
	Marlborough ℳ	40	15	28·5	−11·5	1	0·01	−0·81
	Strathfield Turgiss ℳ	37	13	27·3	−12·7	0	—	−0·72
	Dover	39	25	32·5	− 6·5	2	0·12	−0·58
	Hastings (St. Leonard's)	38	24	31·8	− 7·0	1	0·02	−0·68
	Hurst Castle	39	21	32·3	− 8·1	0	—	?
6. SCOTLAND, W.	Laudale (Loch Sunart)	42	? 26	36·1	− 2·6	4	0·52	?
	Glasgow	38	24	32·2	− 6·0	0	—	−1·25
	Ardrossan	41	24	34·5	− 4·0	1	0·01	−1·13
	Silloth (Cumberland)	40	19	29·4	− 9·6	0	—	−0·90
	Douglas (Isle of Man)	42	23	32·2	− 8·6	1	0·01	−1·22
7. ENGLAND, N.W.	Stonyhurst	38	19	28·7	−10·1	0	—	−1·01
	Manchester	37	19	29·8	− 8·1	0	—	−0·68
	Liverpool Observatory (Bidston)	39	22	31·4	− 8·5	0	—	−0·55
	Holyhead	42	27	35·0	− 6·5	0	—	−0·88
8. ENGLAND, S.W.	Pembroke	40	27	33·3	− 8·7	0	—	−1·10
	Barnstaple	38	20	29·6	−12·3	0	—	−1·03
	Falmouth	40	32	36·3	− 7·8	0	—	−0·95
	Plymouth	39	26	33·0	− 9·6	0	—	−1·12
	Prawle Point	43	27	34·2	− 9·0	0	—	?
9. IRELAND, N.	Londonderry	42	19	29·9	−11·6	1	0·01	−0·94
	Mullaghmore	44	23	32·9	− 7·8	1	0·05	?
	Markree Castle	41	17	29·8	−11·0	1	0·03	−0·61
	Brookeborough	39	13	29·2	−10·1	1	0·06	?
	Armagh	39	17	29·2	−10·8	1	0·01	−0·69
	Donaghadee	41	22	31·7	− 8·8	1	0·02	?
10. IRELAND, S.	Dublin	40	20	30·9	−10·4	1	0·02	−0·58
	Kingstown	44	23	33·3	− 7·9	1	0·06	−0·64
	Parsonstown	42	19	31·0	− 9·0	1	0·01	−0·76
	Roche's Point	46	31	40·0	− 2·5	1	0·18	−1·24
	Valentia	49	29	40·8	− 2·4	3	1·52	−0·10
	Foynes	47	22	33·6	− 7·9	1	0·03	?
SCOTLAND, N.	Sumburgh Head	48	33	39·7	+ 1·0	5	0·20	−1·44
	Stornoway	46	30	39·2	+ 0·2	3	0·25	−1·47
	Wick	43	26	36·5	− 1·9	3	0·19	−0·22
——	Scilly (St. Mary's)	44	35	39·9	− 5·6	0	—	−1·10
	Jersey (Noirmont)	40	24	32·3	−10·8	0	—	−0·73

The observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.
The stations marked with "ℳ" are in connection with the Meteorological Society.

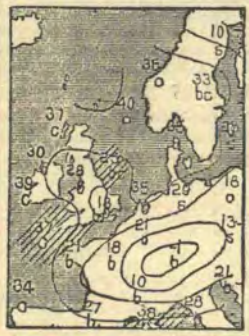
II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending January 26, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.



Tuesday, January 20.

Weather fine over nearly the whole of these Islands and France and over the Skager Rack; cloudy or dull elsewhere. Fine all day but with some mist or fog in the S.E.

Temperature risen slightly in Scotland and quickly in Scandinavia, fallen fast in all other places. Readings ranging from 40° in the Shetlands to 14° at Nottingham. Sharp frost all day and following night.

Wind westerly to north-westerly over our northern and western coasts, easterly over France and our S.W. coasts. Blowing freshly or strongly in the S. and S.W., but light or moderate generally. Little change later, but wind rising to a gale at Scilly.

Sea rough in the S.W. and off the mouth of the Humber.

Barometer fallen fast over Norway and Sweden, risen briskly elsewhere. Large anticyclone over these Islands and a large depression over the Gulf of Bothnia. No change later.

Wednesday, January 21.

Weather fine over France, the Netherlands, and Denmark, as well as at several of our western, south-western, and north-eastern stations; cloudy or dull elsewhere. Slight rain or snow in N. later. Weather fair elsewhere.

Temperature risen these Islands and the N. and W. of France, fallen in other parts of the Continent. Readings ranging over the British Isles from 41° in the Shetlands and 40° at Scilly to 19° at Oxford. Thermometer rising all day.

Wind easterly over France and our S.W. coasts, westerly to north-westerly in the N. and E. and over the North Sea. Calms in our central district. Scarcely any change later.

Sea rough in S.W.

Barometer rising except in W. Norway. Large anticyclone lying over these Islands and France, and a large depression shown off Christiansund. Pressure decreasing everywhere during day—very quickly over Scandinavia.

Thursday, January 22.

Weather moderately fine at our eastern and southern stations, cloudy or dull generally. Slight snow in the S.E. at about noon, but weather fair greater part of day.

Temperature fallen several degrees in Ireland, and slightly in the E. of England, risen in most places; ranging from 41° at Scilly to 24° at Parsonstown and 23° at Oxford. Rising fast, except in Ireland later.

Wind northerly generally, but drawing into N.E. or E. in the S.W., and into N.W. or W. in the S.E. Moderate generally. Slight backing in the N. at night, little other change.

Sea rough at the mouth of the Humber.

Barometer rising in Norway and N. Scotland, falling elsewhere. The highest pressures reported from N. Ireland, the lowest from the Baltic. Fresh fall in N. Scotland at night, and new depression apparently approaching those coasts.

Friday, January 23.

Weather fine at some south-western and south-eastern stations, cloudy or dull generally with a good deal of mist and fog. Dull all day with slight snow in extreme N.

Temperature fallen on our N.W. and N.E. coasts as well as in the countries to the eastward of the North Sea, risen elsewhere. Sharp frost Ireland. Readings ranging from 45° at Sumburgh Head to 24° at Parsonstown. Rising slowly all day.

Wind westerly in Scotland and south-westerly in Norway, northerly (N.W.—N.E.) elsewhere. Blowing strongly on the Norwegian coasts. Southerly wind appearing in Ireland later, little other change.

Sea rough round the Shetlands.

Barometer falling quickly over the N. of Scandinavia and slightly on our northern coasts, rising in all other places. Anticyclone forming over these Islands during the day and barometer falling in W.

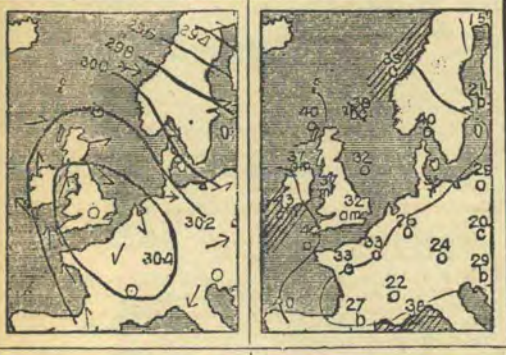
(*Continued over.*)

(*Continued.*)

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.



Weather during the 24 hours succeeding the date of the Charts

Saturday, January 24.

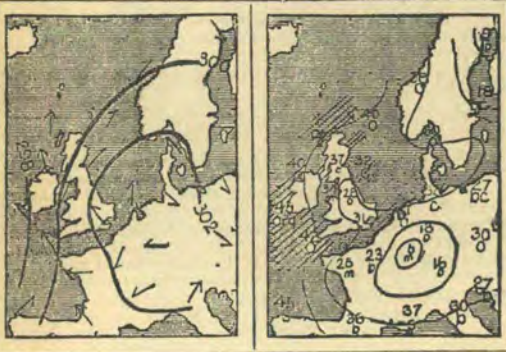
Weather dull except in Sweden, S. France, and at a few of our eastern stations. A good deal of fog or mist prevailing. Heavy rain subsequently falling in S. Ireland. Dull generally.

Temperature risen fast Ireland and Scandinavia, fallen or changed very little elsewhere. Readings ranging from 43° at Valentia to 31° at Nottingham. Little change later.

Wind westerly to north-westerly over Scotland, the North Sea, and Scandinavia, northerly in Belgium, easterly over France, and southerly on our western coasts. Light and variable over England. Southerly wind extending eastward later and increasing to a moderate to fresh gale.

Sea rough off Valentia and Christiansund.

Barometer rising over France and the Netherlands, falling elsewhere—quickly in Ireland and over Scandinavia. Large anticyclone over England and France but brisk fall continuing during day.



Sunday, January 25.

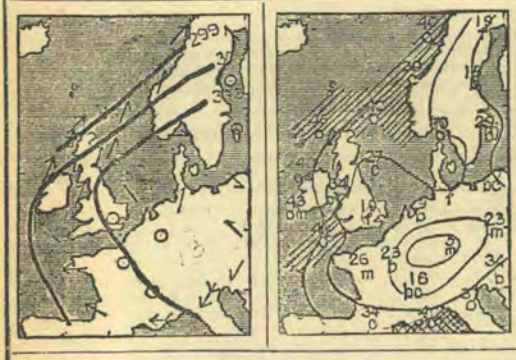
Weather fine in many parts of France and the Netherlands, but cloudy or dull generally, with a good deal of mist and fog. Weather clearing in the S.E. later.

Temperature fallen except in the W.—quickly over France. Readings ranging from 45° at Valentia to 28° at Nottingham. Thermometer falling quickly in the E. and S. in the evening, and sharp frost in following night.

Wind easterly to south-easterly over France and the Channel, and southerly on our other coasts; blowing strongly in the W. and S.W. Very light south-easterly winds over England, and wind falling lighter generally in the evening.

Sea rough in the S.W., W., and N.

Barometer rising over Sweden and Denmark, falling in all other places. Large anticyclone over the eastern part of our area, with comparatively low pressures off our W. coasts. Barometer rising everywhere later.



Monday, January 26.

Weather very fine in parts of E. Scotland and Ireland, over the S.E. of England, the Netherlands, and greater part of France, cloudy or dull elsewhere. Dull and rainy in the N.W. later, fine over England.

Temperature fallen over England, the N. of France, and Holland, risen generally. Readings ranging from 45° at Stornoway to 19° in London. Sharp frost central England continuing all day.

Wind easterly over France and the Channel; southerly on our western and northern coasts and over Scandinavia; with light airs or calms over England. Wind increasing in W. Scotland later and reaching a fresh gale at Stornoway.

Sea rough off our south-western and northern coasts.

Barometer falling in the N. of Scotland and W. of Norway, rising in all other places. Pressure high and uniform over England, France, and N. Germany, but moderate gradients existing in the N. Pressure giving way slowly in N. during day, but not changing much elsewhere.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

(Signed) ROBERT H. SCOTT,
Secretary.

METEOROLOGICAL OFFICE,
116, VICTORIA STREET, S.W.

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5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Stonyhurst, Manchester, Liverpool Observatory (Bidston), Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations 1857-69, as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In degrees Fahrenheit.)				Rainfall. (Amounts in tenths of an inch.)		
		Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for Week.	Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for Week.
Principal Wheat-producing Districts.	1. SCOTLAND, EAST	53	27	43	4 above.	3	4	4 less.
	2. ENGLAND, NORTH-EAST	52	17	35	3 below.	1	less than ½	4 less.
	3. ENGLAND, EAST	55	15	32	7 below.	2	less than ½	5 less.
	4. MIDLAND COUNTIES	56	13	34	6 below.	1	less than ½	5 less.
	5. ENGLAND, SOUTH	55	9	34	7 below.	2	less than ½	6 less.
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	49	25	44	4 above.	4	7	3 less.
	7. ENGLAND, NORTH-WEST	53	20	38	2 below.	2	1	6 less.
	8. ENGLAND, SOUTH-WEST	53	20	41	2 below.	2	1	9 less.
	9. IRELAND, NORTH	54	33	45	5 above.	4	6	2 less.
	10. IRELAND, SOUTH	54	29	46	4 above.	3	9	1 less.

General Remarks.

Weather during this period has been fine and dry over the greater part of England, but fogs of exceptional density and duration have prevailed in the south-eastern counties; rather cloudy or overcast in Scotland; and generally dull and squally in Ireland with rain at times.

Temperature again several degrees below the mean in England, but as much as from 3° to 5° above at the Irish and Scotch stations. Very low readings were recorded over England during the first three days, but by noon on January 30th the warmer weather prevailing in the W. had extended to all districts, and on the following day the thermometer rose to 56° at Loughborough and 55° in London and at Cambridge. The lowest of the minimum readings (9° at Marlborough) occurred on January 28th.

Wind generally fresh to strong from S.W. on all our western and northern coasts, reaching a gale in the N.W. on the 31st. In the south-eastern districts calms or variable airs were experienced.

Rainfall exceedingly heavy at Laudale, but with that exception again less than the mean in all parts of the kingdom; the deficit being only slight in Ireland, but amounting to several tenths in England and Scotland.

The data from which the summary on the preceding page has been calculated are as follow :

Districts.	Names of Stations.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.
		°	°	°	°		Inches.	Inches.
1. SCOTLAND, E.	Nairn	51	37	41·6	+ 3·1	3	0·25	−0·16
	Aberdeen	52	31	44·1	+ 6·5	0	—	−0·61
	Glenalmond	51	27	39·6	+ 1·3	7	1·14	?
	Leith	53	31	45·2	+ 6·8	1	0·01	−0·41
2. ENGLAND, N.E.	Shields	51	24	38·9	+ 0·9	0	—	−0·40
	Durham	52	21	37·1	− 1·2	0	—	−0·40
	York	49	21	33·2	− 5·3	0	—	−0·40
	Spurn Head	51	22	34·9	− 3·6	0	—	?
	Kelstern (Lincolnshire) ℳ	50	17	32·2	− 5·9	3	0·04	−0·35
3. ENGLAND, E.	Yarmouth	45	17	32·2	− 6·0	1	0·02	−0·55
	Cambridge	55	16	32·7	− 6·6	0	—	−0·33
	Audley End (Saffron Walden) ℳ							
	Rothamsted	52	15	31·5	− 8·2	5	0·06	−0·55
4. MIDLAND COUNTIES	Nottingham	53	14	31·9	− 7·2	0	—	−0·40
	Loughborough	56	16	35·6	− 3·7	0	—	−0·50
	Leicester	52	17	34·3	− 5·2	1	0·01	−0·44
	Shrewsbury ℳ	52	13	37·4	− 3·1	2	0·03	−0·45
	Hereford ℳ	53	19	34·1	− 6·6	2	0·02	−0·64
	Cirencester	52	15	30·7	− 9·7	2	0·04	−0·78
	Oxford	50	16	31·1	− 8·7	0	—	−0·50
5. ENGLAND, S.	London	55	12	32·3	− 7·4	0	—	−0·50
	Marlborough ℳ	52	9	32·8	− 7·8	3	0·04	−0·71
	Strathfield Turgiss ℳ	54	14	29·9	−10·6	0	—	−0·66
	Dover	44	24	34·1	− 5·6	1	0·02	−0·59
	Hastings (St. Leonard's)	49	26	36·9	− 2·8	4	0·06	−0·54
	Hurst Castle	47	23	34·8	− 6·2	3	0·08	?
6. SCOTLAND, W.	Laudale (Loch Sunart)	47	40	44·3	+ 5·3	6	7·15*	?
	Glasgow	49	35	44·1	+ 5·2	5	1·13	+0·41
	Ardrossan	47	37	44·4	+ 5·4	4	1·06	+0·01
	Silloth (Cumberland)	48	25	42·3	+ 3·2	4	0·24	−0·60
	Douglas (Isle of Man)	47	35	43·8	+ 2·6	3	0·19	−0·94
7. ENGLAND, N.W.	Stonyhurst	52	21	36·5	− 2·9	2	0·18	−0·80
	Manchester	53	21	36·7	− 2·2	1	0·05	−0·55
	Liverpool Observatory (Bidston)	52	20	36·2	− 4·1	0	—	−0·50
	Holyhead	48	30	41·3	− 0·5	3	0·07	−0·70
8. ENGLAND, S.W.	Pembroke	47	27	42·0	− 0·4	2	0·06	−0·92
	Barnstaple	53	20	38·0	− 4·4	2	0·10	−0·86
	Falmouth	51	33	43·3	− 1·2	2	0·04	−0·87
	Plymouth	51	23	38·7	− 3·9	2	0·23	−0·82
	Prawle Point	53	26	42·0	− 1·3	1	0·05	?
9. IRELAND, N.	Londonderry	51	36	45·1	+ 4·6	5	1·10	+0·24
	Mullaghmore	52	38	46·7	+ 5·7	5	0·87	?
	Markree Castle	54	37	45·9	+ 4·9	3	0·52	−0·52
	Brookeborough	52	34	44·4	+ 4·4	2	0·43	?
	Armagh	50	33	44·5	+ 4·1	2	0·33	−0·33
	Donaghadee	50	33	43·9	+ 3·2	4	0·15	?
10. IRELAND, S.	Dublin	53	29	47·0	+ 5·3	1	0·01	−0·54
	Parsonstown	52	31	44·4	+ 3·5	3	0·40	−0·29
	Roche's Point	51	39	46·6	+ 3·9	5	1·40	+0·11
	Valentia	53	40	46·8	+ 3·5	4	1·91	+0·48
	Foynes	54	34	46·3	+ 4·7	2	?	?
SCOTLAND, N.	Sumburgh Head	49	38	43·9	+ 5·4	7	0·85	+0·23
	Stornoway	50	39	44·5	+ 5·4	6	2·41	+1·23
	Wick	50	37	43·9	+ 5·2	2	0·10	−0·30
——	Scilly (St. Mary's)	53	37	47·1	+ 1·6	3	0·09	−0·91
	Jersey (Noirmont)	52	27	38·4	− 4·6	3	0·03	−0·63

The observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.
The stations marked with "ℳ" are in connection with the Meteorological Society.
The Reports from Kingstown have now ceased.

* The rainfall at Laudale is so exceptional that it has been omitted in calculating the average for the district (Scotland, W.)

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending February 2, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, January 27.

Weather cloudy or dull in the W. and S. of Ireland, as well as over Scotland and Scandinavia; fine in nearly all other places, though foggy over central England. Dense fog in London all day, but no rain falling except in extreme N. and N.W.

Temperature fallen over England, the Netherlands, and N.E. of France, risen elsewhere. Sharp frost central England. Readings ranging from 18° at Oxford to 48° at Valentia. Sharp frost all day over England.

Wind easterly over France, and southerly over western and northern coasts and over Scandinavia, with calms over eastern and central England, and the Netherlands. Wind fresh in the N., and increasing in force later.

Sea rough in the W., N.W., and N.

Barometer fallen quickly over Norway, and slightly at our western and northern stations, risen elsewhere. Pressure high and uniform over the eastern and southern parts of our area. Mercury falling slowly all day.

Wednesday, January 28.

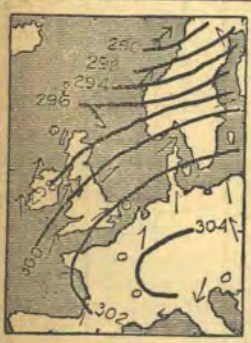
Weather still dull over Scandinavia, and very foggy over central England; fine or moderately so in most other places. Fog continuing in S. all day, but weather fine over greater part of England, though dull and rainy in Ireland and Scotland.

Temperature fallen over the Netherlands and E. coast of England, risen several degrees generally. Readings ranging over these Islands from 19° at Cambridge, to 48° at Valentia. Frost all day in S.E.

Wind still easterly in France, but southerly in nearly all parts of these Islands; very light in E., but strong elsewhere, and blowing a gale in extreme W. Wind increasing generally later. Strong gale in N.W.

Sea rough in W., N.W., and N.

Barometer falling except central France. Anticyclone over central Europe, with large depression off our north-western coasts. Barometer falling briskly in W. all day, and gradients increasing.



Thursday, January 29.

Weather dull in W. and N. with rain in W. Ireland and Norway, fine elsewhere but with fog in S.E. Rain in W. and N. all day and dense fog in London.

Temperature risen in Scandinavia, on our S.W. coasts, and in the W. and N. of France, fallen elsewhere, sharp frost S.E. Readings ranging from 21° in London to 50° at Valentia. Frosty all day in S.E.

Wind easterly over France, southerly to south-westerly elsewhere; light generally but blowing strongly on our western coasts and reaching a gale in Norway. Moderate to fresh southerly gale in W. later.

Sea rough in the W. and N. and high off the W. of Norway.

Barometer still rising over France, falling in nearly all other places—quickly over Scandinavia. Anticyclone over central Europe with large depression over N. Norway and smaller disturbance off Ireland. Pressure giving way in W. all day.

Friday, January 30.

Weather dull and rainy at most Irish and Scotch stations, fine in nearly all other places. Fine all day over England.

Temperature fallen briskly over Scandinavia, risen elsewhere—very quickly at our central and south-eastern stations. Readings ranging from 30° at Nottingham to 50° at Scilly. Slight frost in S.E. at night.

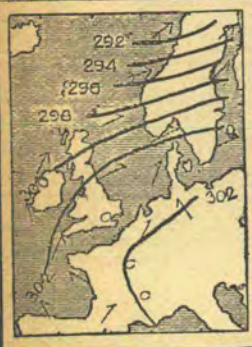
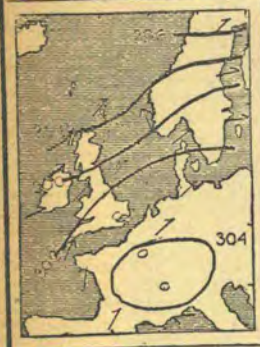
Wind southerly in nearly all parts of western Europe, light in the S.E. but fresh or strong in force generally and blowing a gale in a few places. Little change later, wind remaining strong.

Sea rough except on our S.E. coasts.

Barometer rising at our south-eastern stations, over France, and in the countries to the eastward of the North Sea, falling elsewhere—quickly on our N.W. coasts. Large depression near the Hebrides passing north-eastward later and barometer rising.

(*Continued over.*)

(*Continued.*)

Synoptic Weather Charts.—8 a.m.		**Weather** during the 24 hours succeeding the date of the Charts
Barometer and Wind.	Cloud, Rain, Sea, and Temperature.	
		Saturday, January 31. *Weather* dull in the extreme W. but fine generally; dense fog over the S.E. of England. Weather fine over England greater part of day but dense fog returning in London at night. *Temperature* fallen a little in Ireland and the S.E. of England, risen elsewhere. Readings ranging from 30° at Cambridge to 49° in the S.W. Thermometer rising to 50° or above in many places during day, but sharp frost in S.E. again at night. *Wind* still southerly to south-westerly in nearly all parts of our area, blowing strongly at some western stations and reaching a gale at Mullaghmore. Gale continuing in N.W. all day but wind very light in S.E. *Sea* rough S.W., W., and N. *Barometer* rising except in the N. of Scandinavia. Pressure still highest central Europe, and lowest over northern Scandinavia. Fresh depression appearing on our northern coasts later and barometer falling except in S.E.
		**Sunday, February 1.** *Weather* fine in the E. and S.E. of England, the N. of France, and N. Germany; dull in most other places. Dense fog central England. Fog clearing for a few hours in afternoon; little other change. *Temperature* fallen briskly over greater part of England, changed irregularly elsewhere. Sharp frost S.; readings ranging from 26° at Oxford to 51° at Valentia. Maxima about 50° in many places, but slight frost prevailing in S.E. at night. *Wind* easterly over France, southerly (S.W.—S.E.) on our western coasts, and south-westerly to westerly in the N. and over Scandinavia; light or moderate generally, but blowing strongly in W. Ireland and reaching a gale in Norway. *Sea* rough in the S.W. and N. *Barometer* falling at most of our more southern stations and in the countries to the eastward of the North Sea, rising a little elsewhere. Pressure still highest over eastern France and lowest over the N. of Sweden, with depressions passing northward near our western coasts.
		**Monday, February 2.** *Weather* fine at our eastern and south-eastern stations and over the Netherlands and N. France; cloudy or dull elsewhere, with mist in several places; dense fog in London and rain in the W. Fog in the S.E. clearing later and weather fair. *Temperature*, changes slight and irregular. Readings ranging from 28° in London to 50° at Scilly and 49° at Nairn, Temperature rising considerably during day in S.E. England. *Wind* southerly (S.W.—S.E.) in nearly all parts of western Europe. Blowing freshly in the N.W., but light or moderate in force generally. No change during day beyond shift of wind to N.W. at Valentia. *Sea* rough off Scilly and Skudesnaes. *Barometer* rising slowly in France and quickly in Sweden, falling elsewhere. Readings still highest over France and lowest over Scandinavia, but gradients slighter than of late. Mercury rising slowly all day.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

(Signed) ROBERT H. SCOTT,
Secretary.

Meteorological Office,
116, Victoria Street, S.W.

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WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 6.] WEEK ENDING MONDAY, FEBRUARY 9, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE AND RAINFALL IN THE UNITED KINGDOM FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the Stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Shrewsbury, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Hurst Castle.
6. SCOTLAND, W.—Landale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations 1857-69, as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for Week.
Principal Wheat-producing Districts.	1. SCOTLAND, EAST	57	25	41	3 above.	5	8	2 more.
	2. ENGLAND, NORTH-EAST	56	26	42	3 above.	4	4	1 more.
	3. ENGLAND, EAST	54	27	40	0 (average).	5	6	1 more.
	4. MIDLAND COUNTIES	53	27	42	1 above.	6	5	0 (average).
	5. ENGLAND, SOUTH	54	25	41	0 (average).	6	8	3 more.
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	52	29	42	2 above.	6	15	1 more.
	7. ENGLAND, NORTH-WEST	52	25	42	1 above.	6	7	1 more.
	8. ENGLAND, SOUTH-WEST	56	35	46	3 above.	6	9	1 more.
	9. IRELAND, NORTH	55	29	43	2 above.	4	5	0 (average).
	10. IRELAND, SOUTH	58	31	45	3 above.	5	11	3 more.

General Remarks.

Weather during this period has been in an unsettled changeable condition. During the first three days it was dull and rather rainy in Ireland, fair over Scotland and the greater part of England, and dry but very foggy at our south-eastern stations. By the evening of the 6th, however, the unsettled weather noticed in the W. had extended to all parts of our islands, and, with temporary clearances, continued till the close of the week.

Temperature about the mean for the time of year in "England, E." and "S.," but a few degrees above in all other districts. The highest of the maximum readings, 57° at Leith and 58° at Dublin, occurred on the 4th. No very striking minima were registered, but sharp night frosts were experienced at many of our eastern and south-eastern stations until the 6th or 7th.

Wind generally south-westerly all over the country, but veering to N.W. or N. for a short time in Ireland on the 5th and again on the 9th. In force it was moderate to fresh on most days, but blew a whole gale from S. on our western and north-western coasts on the 6th, and a very hard south-westerly gale in the Channel and S. and S.W. of England on the 9th.

Rainfall slightly more than the mean in all districts except "Ireland, N.," and the "Midland Counties," where the fall just equalled the mean.

The data from which the summary on the preceding page has been calculated are as follow :

Districts.	Names of Stations.	Temperature.				Rainfall.		
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.
		°	°	°	°		Inches.	Inches.
1. SCOTLAND, E.	Nairn	55	27	41·7	+ 2·7	4	0·52	+0·14
	Aberdeen	52	28	42·3	+ 4·1	4	0·82	+0·25
	Glenalmond	48	25	38·6	− 0·4	6	1·28	?
	Leith	57	29	42·8	+ 4·1	5	0·58	+0·18
2. ENGLAND, N.E.	Shields	56	32	43·0	+ 4·5	3	0·39	−0·01
	Durham	53	26	40·9	+ 2·0	3	0·46	+0·05
	York	52	26	40·5	+ 1·5	5	0·41	+0·01
	Spurn Head	46	34	40·3	+ 1·3	3	0·17	?
	Kelstern (Lincolnshire) ℳ	47	30	44·6	+ 6·0	7	0·58	+0·18
3. ENGLAND, E.	Yarmouth	44	31	38·5	− 0·5	5	0·48	−0·08
	Cambridge	54	27	40·7	+ 0·8	4	0·46	+0·16
	Rothamsted	54	27	41·2	+ 1·0	7	0·72	+0·17
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	48	31	41·1	+ 1·4	5	0·49	+0·09
	Nottingham	51	28	41·2	+ 1·4	6	0·49	+0·09
	Loughborough	51	32	42·4	+ 2·5	4	0·47	−0·03
	Leicester	50	32	42·4	+ 2·2	4	0·35	−0·07
	Shrewsbury ℳ	52	27	40·2	− 0·8	6	0·53	+0·06
	Hereford ℳ	53	31	42·8	+ 1·5	7	0·70	+0·09
	Cirencester	48	30	40·5	− 0·4	7	0·72	0·00
	Oxford	49	30	41·4	+ 1·0	7	0·44	−0·03
5. ENGLAND, S.	London	54	25	41·7	+ 1·3	5	0·79	+0·39
	Marlborough ℳ	49	30	41·4	+ 0·4	7	0·91	+0·24
	Strathfield Turgiss ℳ	53	28	41·8	+ 0·8	5	0·62	+0·02
	Dover	45	32	39·2	− 1·2	5	0·88	+0·33
	Hastings (St. Leonard's)	48	31	40·5	0·0	5	0·98	+0·44
	Hurst Castle	48	33	41·4	0·0	7	0·46	?
6. SCOTLAND, W.	Laudale (Loch Sunart)	49	31	40·3	+ 0·8	6	2·92	?
	Glasgow	52	31	42·4	+ 2·9	7	1·06	−0·09
	Ardrossan	48	31	43·3	+ 3·9	6	0·60	−0·35
	Silloth (Cumberland)	51	29	41·4	+ 1·8	5	1·18	+0·41
	Douglas (Isle of Man)	50	32	41·5	+ 0·1	7	1·59	+0·55
7. ENGLAND, N.W.	Stonyhurst	50	26	40·3	+ 0·3	7	0·72	−0·22
	Blackpool ℳ	52	25	40·0	− 0·5	7	0·76	?
	Manchester	50	25	40·6	+ 0·9	3	0·41	−0·16
	Liverpool Observatory (Bidston)	52	29	42·6	+ 1·7	7	0·37	−0·07
	Holyhead	49	35	44·0	+ 1·9	7	1·43	+0·74
8. ENGLAND, S.W.	Pembroke	49	38	44·2	+ 1·4	7	1·30	+0·42
	Barnstaple	56	38	46·9	+ 4·1	6	0·93	+0·03
	Falmouth	52	41	46·9	+ 3·2	7	1·01	+0·11
	Plymouth	51	36	45·8	+ 2·8	6	0·81	−0·18
	Prawle Point	53	35	44·6	+ 1·1	6	0·43	?
9. IRELAND, N.	Londonderry	54	30	42·1	+ 1·4	5	0·45	−0·35
	Mullaghmore	54	35	44·2	+ 3·1	4	0·52	?
	Markree Castle	54	30	42·2	+ 1·0	5	0·53	−0·17
	Brookeborough	55	30	42·1	+ 1·6	2	0·58	?
	Armagh	53	32	42·7	+ 1·8	4	0·58	+0·06
	Donaghadee	52	29	42·5	+ 1·4	6	0·55	?
10. IRELAND, S.	Dublin	58	35	45·1	+ 3·1	5	1·02	+0·52
	Parsonstown	57	31	43·7	+ 2·3	5	0·45	−0·15
	Roche's Point	53	35	44·6	+ 1·7	7	1·91	+0·74
	Valentia	54	37	46·3	+ 2·8	6	1·47	+0·18
	Foynes	57	37	44·9	+ 2·9	3	0·53	?
SCOTLAND, N.	Sumburgh Head	50	34	42·1	+ 3·6	6	0·77	+0·17
	Stornoway	50	31	41·0	+ 1·7	4	1·20	+0·05
	Wick	52	25	40·7	+ 1·6	3	0·13	−0·28
——	Scilly (St. Mary's)	52	41	47·5	+ 2·0	7	0·89	−0·01
	Jersey (Noirmont)	49	36	42·8	− 0·2	6	0·87	+0·27

The observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.
The stations marked with "ℳ" are in connection with the Meteorological Society.
Bawtry (Hesley Hall) and Blackpool have been added to the above list of stations. The reports from Audley End have now ceased.

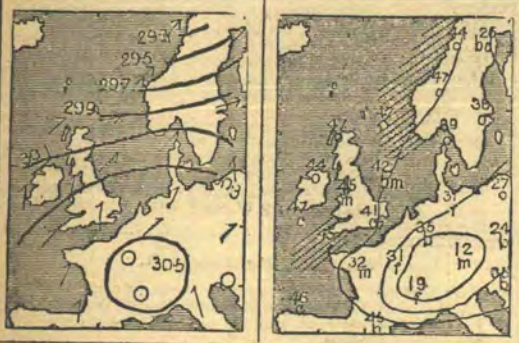
II.—SUMMARY OF WEATHER IN WESTERN EUROPE during the Week ending February 9, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.



Tuesday, February 3.

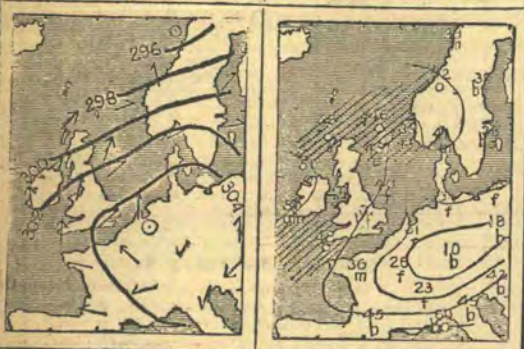
Weather fine in the E. of Scotland, the N.E. of England, and S. of France, cloudy or dull in most other places, with fog or mist at a great number of stations. Little change during day beyond slight drizzling rain in S.W.

Temperature fallen a little on our western and northern coasts and over France, risen briskly in the S.E. and over N. Germany. Readings ranging from 47° in the W. and N. to 36° at Dover. Slight frost in S.E. at night.

Wind easterly over France, south-westerly to westerly over these Islands and south-westerly in Norway. Light or moderate in force at most stations, but blowing a gale in W. Norway. Wind backing and increasing in force on our western coasts at night.

Sea rough in the S.W. and N.

Barometer rising over the greater part of western Europe, but falling briskly in Scandinavia and slightly in Ireland. Anticyclone over France. Decrease in the W. continuing and spreading to all our stations.



Wednesday, February 4.

Weather fine in some parts of France, the Netherlands, and south-eastern England, but still cloudy generally, with much fog and mist. Dense fog in London at noon. Rain falling at Valentia in the evening, but weather clearing a good deal elsewhere.

Temperature fallen over the S.E. of England and the Netherlands, risen slightly in most other places. Frost in S.E. Readings ranging from 31° in London to 51° in N. Ireland. Rising briskly during day but falling again at night.

Wind still easterly over France but southerly (S.W.—S.E.) over the whole of these Islands, the North Sea, and Scandinavia. Blowing strongly in the W. but moderate or light generally. Increasing to a moderate gale in Ireland later.

Sea rough in the S.W. and N.

Barometer falling somewhat over the British Isles and France, rising in the countries to the eastward of the North Sea—quickly in Norway. Anticyclone over E. France and N. Germany. Pressure giving way slowly all day.

Thursday, February 5.

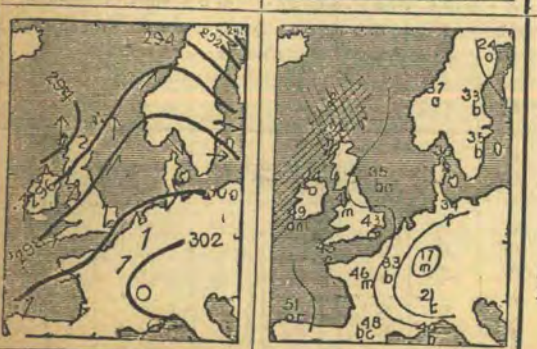
Weather dull and showery on our S.W. coasts, and misty over France, fair or fine in nearly all other places. Fine in most places during day, but dull, foggy, and rainy over the Channel.

Temperature fallen except in Scandinavia. Readings ranging from 50° at Scilly, to 28° in London. Thermometer rising fast in S.E., and slowly generally during day. Complete thaw.

Wind north-westerly to northerly in Ireland and W. Scotland, southerly and south-westerly over the Channel, Great Britain generally, and the North Sea. Fresh or strong in force, except in the S. and S.E. Wind backing again to S.W. in the W. later.

Sea rough at Scilly and to the northward of our Islands.

Barometer fallen briskly generally, but recovering again in the W. Large depression to the northward of Scotland, and smaller disturbances crossing these Islands. Rising in the W. and N. later, still falling in the S.E.



Friday, February 6.

Weather fine at some north-eastern stations and in parts of France, cloudy or dull elsewhere, with rain and mist in the S.W. Overcast all day, with rain in the W.

Temperature fallen several degrees in the N.E., risen slightly in the W., and fast in the S. and over France. Readings ranging from 49° at Valentia, to 31° at York. Maxima during day between 45° and 50°.

Wind southerly or south-westerly on all except the Swedish coasts, where it is westerly. Blowing a moderate gale in the extreme W. generally, light elsewhere. Wind increasing considerably later, and blowing a hard gale in the W.

Sea rough in the N.W., high off the Hebrides.

Barometer falling everywhere all day, the decrease in the W. between 8 A.M. and 6 P.M. amounting to over half an inch. Large depression passing slowly northward outside our western coasts.

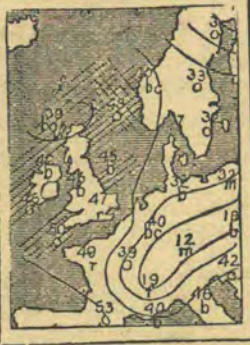
(*Continued over.*)

(Continued.)

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.



Weather during the 24 hours succeeding the date of the Charts

Saturday, February 7.

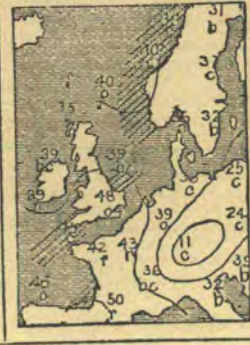
Weather dull all over the S. of England and W. and N. of France with rain over the Channel, but fine at our western and northern stations. Weather fine all day in Scotland but dull and rainy over Ireland and England.

Temperature fallen on our north-western coasts and over N. Sweden, risen elsewhere. Readings below 40° over Central Ireland but uniform between 40° and 50° elsewhere. Maxima again between 45° and 50°.

Wind south-westerly on nearly all our own and the French coasts and southerly on the eastern shores of the North Sea. Fresh or strong at most of our stations and blowing a gale in the N. and over Norway. Southerly gale in the S.W. at night.

Sea rough in the W. and N. generally and high near the Shetlands and Skudesnaes.

Barometer fallen fast except over the Baltic but brisk recovery commencing in the W. Large depression near the Shetlands, but moving away during day and barometer rising in N. New disturbance in the S.W. later and barometer falling there.



Sunday, February 8.

Weather dull and rainy on our S.E. coasts, in many parts of France, and the E. of Scotland, fine in the W. and N.W. Fine generally during the day but heavy showers of hail and rain in London.

Temperature risen considerably in the E. of France, fallen elsewhere. Readings ranging from 45° to 35°. Maxima again between 45° and 50°.

Wind westerly on nearly all our coasts but drawing into S. over the North Sea and into S.E. in Norway. Generally moderate in force. Wind backing to S. in the S.W. and into E. in the W. at night, and increasing considerably.

Sea rough in the S.W. and off the Norwegian coast.

Barometer rising briskly in Ireland, falling elsewhere. Readings highest S. France, lowest off Aberdeen, with small depressions passing over us. Brisk fall in the S.W. later and fresh depression appearing.

Monday, February 9.

Weather fine at most of the more northern stations, dull and rainy in the S.W., S., and Midland districts. Sky clearing in Ireland later, but rain and overcast skies elsewhere.

Temperature risen in the S.W., fallen generally; readings ranging from 48° at Scilly to 28° at Nairn. Temperature rising in E. and falling in W. later. Maxima again between 45° and 50°.

Wind south-westerly and southerly over France, the Channel, and the S. of England, easterly in the N. of England and N. of Ireland. Blowing a very severe gale in the S.W. and gale extending up the Channel during day.

Sea high in the S.W., rough in the S. and S.E.

Barometer risen in the N., fallen fast elsewhere, and deep depression (28·9 ins.) shown off the S. of Ireland. Disturbance passing north-eastward across England later, barometer falling in the N. and recovering in the S. and W.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟩⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

(Signed) ROBERT H. SCOTT,
Secretary.

METEOROLOGICAL OFFICE,
116, VICTORIA STREET, S.W.

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WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 7.] WEEK ENDING MONDAY, FEBRUARY 16, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE AND RAINFALL IN THE UNITED KINGDOM FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the Stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations 1857-69, as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In degrees Fahrenheit.)				Rainfall. (Amounts in tenths of an inch.)		
		Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for Week.	Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for Week.
Principal Wheat-producing Districts.	1. SCOTLAND, EAST	52	28	39	0 (average).	4	5	1 less.
	2. ENGLAND, NORTH-EAST	50	30	40	1 above.	5	7	3 more.
	3. ENGLAND, EAST	53	29	40	0 (average).	5	7	3 more.
	4. MIDLAND COUNTIES	54	28	41	0 (average).	6	11	6 more.
	5. ENGLAND, SOUTH	55	27	42	1 above.	5	12	6 more.
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	50	30	41	0 (average).	6	9	4 less.
	7. ENGLAND, NORTH-WEST	51	29	41	0 (average).	5	5	2 less.
	8. ENGLAND, SOUTH-WEST	52	34	44	0 (average).	6	12	4 more.
	9. IRELAND, NORTH	50	27	40	2 below.	6	11	3 more.
	10. IRELAND, SOUTH	52	29	42	1 below.	7	19	12 more.

General Remarks.

Weather very changeable and unsettled over the whole country. On the 10th, 11th, and 13th the sky was moderately clear in most places, but on all other days the weather was dull, squally, and very rainy generally.

Temperature slightly above the mean value in "England, S.," and "England, N.E.," below it over Ireland, and about the mean for the time of year in all other districts. Several slight frosts were experienced during night time at the central, eastern, and northern stations.

Wind southerly (S.E. to S.W.) generally in nearly all places; over the S.E. of England, however, easterly to north-easterly breezes were reported at the commencement of the period. In force the wind was generally strong in the S.W., W., and N. and very frequently blew a strong gale, while on our eastern coasts it was moderate to fresh until the 16th; a strong gale then blew over all parts of the kingdom.

Rainfall less than the mean in "England, N.W.," and over Scotland, but more in all other districts. In "Ireland, S.," the "Midland Counties," and "England, S." the excess was rather large.

The data from which the summary on the preceding page has been calculated are as follow :

Districts.	Names of Stations.	Temperature.				Rainfall.		
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.
		°	°	°	°		Inches.	Inches.
1. SCOTLAND, E.	Nairn	47	28	38·7	− 0·5	0	—	−0·35
	Aberdeen	49	29	39·7	+ 0·8	6	0·99	+0·44
	Glenalmond	45	30	37·3	− 2·2	6	1·00	?
	Leith	52	29	40·2	+ 0·7	2	0·13	−0·26
2. ENGLAND, N.E.	Shields	48	34	40·8	+ 1·7	4	0·42	+0·02
	Durham	49	30	39·6	− 0·5	4	0·48	+0·02
	York	50	30	40·5	+ 0·8	6	1·09	+0·68
	Spurn Head	49	35	40·9	+ 1·4	4	0·42	?
	Kelstern (Lincolnshire) ⊕	48	30	39·4	− 0·1	5	1·02	+0·60
3. ENGLAND, E.	Yarmouth	47	33	39·3	− 0·3	4	0·58	+0·05
	Cambridge	53	29	41·1	+ 0·6	4	0·45	+0·14
	Rothamsted	51	30	40·3	+ 0·3	6	1·13	+0·63
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	49	31	39·5	− 0·7	5	1·13	+0·74
	Nottingham	51	29	40·5	0·0	6	1·06	+0·62
	Loughborough	54	32	41·6	+ 1·1	6	1·20	+0·75
	Leicester	50	30	41·2	+ 0·5	5	1·30	+0·88
	Birmingham (Oscott)*	50	31	40·8	− 0·2	6	0·91	+0·34
	Shrewsbury ⊕	51	28	40·7	− 0·8	6	0·91	+0·43
	Hereford ⊕	51	34	43·0	+ 1·2	7	1·12	+0·56
	Cirencester	49	30	40·1	− 1·4	5	1·18	+0·54
	Oxford	52	33	41·8	+ 1·3	6	1·17	+0·73
5. ENGLAND, S.	London	55	30	42·2	+ 1·1	4	0·63	+0·23
	Marlborough ⊕	52	31	42·0	+ 0·5	6	1·63	+1·03
	Strathfield Turgiss ⊕	54	27	41·6	+ 0·4	5	1·66	+1·16
	Dover	49	35	41·2	+ 0·2	4	0·44	−0·01
	Hastings (St. Leonard's)	48	35	42·1	+ 0·6	6	1·06	+0·60
	Hurst Castle	51	37	42·8	+ 1·3	5	1·93	?
6. SCOTLAND, W.	Laudale (Loch Sunart)	48	34	40·6	+ 0·8	7	2·34	?
	Glasgow	49	33	40·8	+ 1·0	7	0·41	−0·64
	Ardrossan	47	31	40·2	+ 0·3	6	0·44	−0·40
	Silloth (Cumberland)	50	31	40·6	+ 0·2	4	0·40	−0·27
	Douglas (Isle of Man)	49	30	40·1	− 1·5	5	0·70	−0·20
7. ENGLAND, N.W.	Stonyhurst	49	29	40·3	− 0·2	6	0·53	−0·37
	Blackpool ⊕	50	29	40·0	− 1·2	6	0·51	?
	Manchester	49	29	41·0	− 0·2	5	0·30	−0·25
	Liverpool Observatory (Bidston)	51	32	41·4	− 0·1	4	0·37	−0·01
	Holyhead	50	35	42·5	0·0	5	0·58	0·00
8. ENGLAND, S.W.	Pembroke	48	36	43·3	− 0·2	5	1·22	+0·46
	Barnstaple	53	34	44·3	+ 1·1	6	1·19	+0·39
	Falmouth	51	38	45·3	+ 0·4	6	1·52	+0·65
	Plymouth	52	34	43·7	+ 0·1	6	0·77	−0·10
	Prawle Point	50	35	43·5	− 0·1	6	1·03	?
9. IRELAND, N.	Londonderry	50	29	39·4	− 1·9	6	0·71	−0·03
	Mullaghmore	49	34	41·2	− 0·2	7	1·28	?
	Markree Castle	47	27	38·5	− 3·1	7	0·79	+0·09
	Brookeborough	49	28	38·5	− 2·5	6	1·25	?
	Armagh	49	32	40·1	− 1·1	6	1·32	+0·72
	Donaghadee	50	30	39·7	− 1·7	6	1·00	?
10. IRELAND, S.	Dublin	49	32	41·6	− 0·5	5	1·28	+0·84
	Parsonstown	49	29	38·5	− 3·4	7	1·15	+0·65
	Roche's Point	50	34	42·9	− 0·2	7	2·47	+1·43
	Valentia	52	36	44·2	+ 0·2	7	2·77	+1·67
	Foynes	49	33	40·8	− 1·8	7	1·83	?
SCOTLAND, N.	Sumburgh Head	47	34	40·9	+ 2·4	?	?	?
	Stornoway	46	32	40·2	+ 0·7	3	0·31	−0·79
	Wick	49	33	40·1	+ 0·8	4	0·14	−0·28
——	Scilly (St. Mary's)	53	40	47·5	+ 1·8	4	0·31	−0·45
	Jersey (Noirmont)	52	39	44·1	+ 0·9	7	1·31	+0·76

The observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.
The stations marked with "⊕" are in connection with the Meteorological Society.
* Birmingham (Oscott) has now been added to the list of stations in the "Midland Counties."

II.—SUMMARY OF WEATHER IN WESTERN EUROPE during the Week ending February 16, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, February 10.

Weather fine at several central and northern stations, and in N. Scandinavia, dull in most other places, with rain at Valentia, and showers and fog in the S.E. Fine in E. during day, dull and unsettled in W.

Temperature fallen N. Scandinavia, risen Scotland and S.W. France, changed irregularly elsewhere. Readings uniform between 38° and 48°. Maxima between 45° and 50°, and slight frost at inland stations at night.

Wind strong from E. over France and Norway, and moderate to fresh from S. to W. over these Islands and the North Sea. Easterly wind spreading to our S. coasts later, and south-westerly wind in the N.W. increasing in force.

Sea rough in the S.W. and N.

Barometer rising fast over Scandinavia, and slightly at most of our stations, but falling over France and our N.W. coasts. Well marked depression shown over France later, and pressure giving way on our S. coast, but mercury rising elsewhere.

Wednesday, February 11.

Weather dull at Valentia as well as over France, eastern, and central England, and Sweden and Norway, fine though hazy elsewhere. Rainy and dull all over Ireland later, but fine over greater part of Great Britain.

Temperature risen Scandinavia, fallen in nearly all other places,—quickly over central Ireland. Readings ranging from 47° at Valentia to 29° at Parsonstown, and 34° at York. Rising briskly during day.

Wind southerly in the W. and N., northerly in the E. and S. and over N. France, but westerly to southerly in S.W. France. Strong at Valentia and over the Bay of Biscay, moderate elsewhere. South wind in W., increasing to a hard gale later, and extending eastward over us.

Sea high at Scilly and Biarritz, and rough at Valentia.

Barometer rising everywhere. Pressure highest over Gulf of Bothnia, with band of high readings over these Islands, and depressions off our N.W. coast and over France. Mercury falling rapidly in W. later, and deep depression approaching Ireland.

Thursday, February 12.

Weather fine at some western and north-western stations, but dull, unsettled, and rainy generally, with some fog and mist. Sky clear over the E. of Scotland and greater part of England in the evening, but dull and showery in the morning.

Temperature risen except at Valentia, readings ranging from 47° at Scilly to 35° at York. Mild day generally, but turning colder at night, with slight frost in inland districts.

Wind westerly in the S., south-westerly and southerly elsewhere, moderate or fresh on most coasts, but blowing a gale in far N. Gale in N. all day and westerly gale springing up at Scilly; little other change.

Sea very high at Scilly and Wick, high at Sumburgh Head, and rough in the W.

Barometer rising on the Continent generally, and recovery commencing in Ireland, but falling at most of our stations. Depression off our N.W. coasts, and small subsidiary disturbances passing over us. General recovery later.

Friday, February 13.

Weather very fine over Great Britain but dull in Ireland. Rain setting in in Ireland later, and the dull weather spreading to the W. of England, but sky clear all day in the E.

Temperature fallen several degrees except South Ireland. Readings ranging from 45° at Valentia to 31° at Cambridge. Temperature rising briskly during day and maxima exceeding 50° in South.

Wind moderate or light from W. and S.W. at most of our own and the French stations but backed to S. and S.E. in S. Ireland. Wind backing all over the W. later and hard S.E. gale blowing in Ireland.

Sea high in N.W. and S.W., rough in W.

Barometer falling slightly at Valentia, rising in all other places. High pressure over S. France and N. Scandinavia, low to northward of Scotland. Rapid fall in W. later and deep depression off the W. of Ireland.

(*Continued over.*)

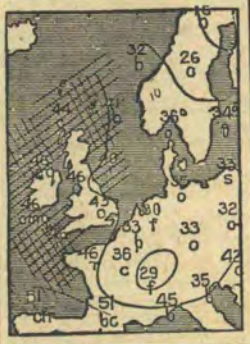
(*Continued.*)

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts



Saturday, February 14.

Weather dull except in some parts of Ireland and the Netherlands, with rain in the central and southern districts, snow at Hawes, and fog in N. Germany. Clearing in W. later but cloudy and rainy generally.

Temperature scarcely changed Scandinavia, and fallen over N. Germany, risen elsewhere—considerably over these Islands. Readings ranging from 48° at Cork to 37° at Spurn Head. Rather low in E. at night.

Wind southerly (S.W.—S.E.) generally, blowing a gale in N. Ireland and Caithness and freshly or strongly on most coasts. Wind veering to W. later but fresh from S. all day in most places.

Sea high in the S.W., N.W., and N., and rough except in the S.E.

Barometer falling except in Sweden. Large area of high pressure over the eastern part of our area with a deep depression off our N.W. coasts. Decrease of pressure in N.W. exceeding half an inch. Depression moving northward later and pressure recovering in the S.W.

Sunday, February 15.

Weather fine all over the northern parts of the Kingdom, but dull, cloudy, and foggy elsewhere, with rain at Valentia. Rain extending to all the Irish and southern English stations later.

Temperature fallen slightly in most places. Readings ranging over these Islands from 49° at Scilly to 32° at Nairn. Maxima during day between 45° and 50° generally.

Wind southerly generally, but south-easterly in S. Ireland. Blowing a moderate to strong gale on our S.W. coasts but light or moderate generally. Wind veering somewhat in the W. later and gale extending eastward.

Sea high in the S.W., rough in the W. and N.

Barometer rising slightly in the N. and N.E., fallen elsewhere, quickly in the S.W. Large depression approaching our S.W. coasts. Barometer falling briskly all day and disturbance passing northward along Irish coast.

Monday, February 16.

Weather fine at Stornoway and Nairn, dull in nearly all other places with rain all over the W. and N. of France and the southern parts of these Islands. Weather showery all day and heavy rain at night.

Temperature risen over these Islands and France, fallen in Scandinavia. Readings ranging from 51° at Scilly to 40° at Yarmouth and in the Shetlands. Maxima between 50° and 55° in the S. and E., between 45° and 50° elsewhere.

Wind southerly over France, the Channel, and our southern stations, and in N. Scotland, easterly over our central and western districts. Strong to a gale in force. Fresh to severe gales felt on most coasts during the day.

Sea tremendously high in the N.E., and rough to high generally.

Barometer falling fast everywhere, change exceeding half an inch in all parts of these Islands except N.E. Scotland, and amounting to an inch in the S.W. Deep depression near Scilly passing slowly northward during day and pressure recovering in S.W.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⇛ = a heavy gale; ⇒ = a gale; → = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

(Signed) ROBERT H. SCOTT,
Secretary.

METEOROLOGICAL OFFICE,
116, VICTORIA STREET, S.W.

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WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 8.] WEEK ENDING MONDAY, FEBRUARY 23, 1880. [*Price 2d.* [*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE AND RAINFALL IN THE UNITED KINGDOM FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the Stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations 1857-69, as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for Week.
Principal Wheat-producing Districts.	1. SCOTLAND, EAST	53	33	44	4 above.	4	7	1 more.
	2. ENGLAND, NORTH-EAST	55	30	44	4 above.	5	5	1 more.
	3. ENGLAND, EAST	59	28	44	4 above.	6	9	5 more.
	4. MIDLAND COUNTIES	57	28	44	3 above.	6	7	3 more
	5. ENGLAND, SOUTH	55	29	45	3 above.	7	9	4 more.
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	50	32	44	3 above.	5	9	0 (average).
	7. ENGLAND, NORTH-WEST	53	31	44	2 above.	5	7	1 more.
	8. ENGLAND, SOUTH-WEST	57	36	47	3 above.	6	10	4 more.
	9. IRELAND, NORTH	53	29	44	3 above.	5	6	2 less.
	10. IRELAND, SOUTH	55	34	46	3 above.	6	9	2 more.

General Remarks.

Weather during this period has been showery, squally, and unsettled generally; clear sky was, however, experienced in most places at frequent intervals.

Temperature 4° above the mean for the time of year in the E. and N., and 3° above in nearly all other districts. Some rather high maximum readings were registered at the inland English stations on the 18th, the thermometer rising to 59° at Cambridge, 57° at Leicester, and to 55° in several other places. No very low minima were observed, and scarcely any frost occurred.

Wind until the 20th was generally south-westerly, but by the 21st it had shifted to W., and by the 22nd to N., and continued to blow from the last named point (except in Scotland) during the remainder of the period. The south-westerly current varied in force from a strong breeze to a gale on nearly all our coasts, but the westerly wind was generally moderate or fresh, and the northerly current light in all parts of the country.

Rainfall slightly less than the mean in "Ireland, N.," equal to it in "Scotland, W.," but rather more than the mean in all other districts. Smart showers of hail fell over the S.E. counties between the 20th and 23rd.

The data from which the summary on the preceding page has been calculated are as follow :

Districts.	Names of Stations.	Temperature.				Rainfall.		
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean
		°	°	°	°		Inches.	Inches.
1. SCOTLAND, E.	Nairn	51	33	42·9	+ 3·5	3	0·48	+0·17
	Aberdeen	51	39	44·2	+ 4·8	5	0·68	+0·16
	Glenalmond	50	34	41·7	+ 1·9	5	1·35	?
	Leith	53	38	45·2	+ 5·3	2	0·25	−0·09
2. ENGLAND, N.E.	Shields	53	38	44·7	+ 5·0	6	0·42	+0·02
	Durham	52	36	43·5	+ 3·5	4	0·78	+0·31
	York	55	30	43·5	+ 3·3	5	0·27	−0·17
	Spurn Head	52	35	43·6	+ 3·6	3	0·38	?
	Kelstern (Lincolnshire) ℳ	52	31	42·8	+ 2·6	5	0·48	+0·06
3. ENGLAND, E.	Yarmouth	57	33	44·2	+ 3·9	5	1·05	+0·54
	Cambridge	59	29	45·1	+ 4·1	7	0·71	+0·36
	Rothamsted	55	28	43·9	+ 2·9	7	0·92	+0·46
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	54	32	43·0	+ 2·1	6	0·22	−0·15
	Nottingham	55	30	43·4	+ 2·6	7	0·35	−0·06
	Loughborough	54	31	44·2	+ 3·4	6	0·57	+0·17
	Leicester	57	32	44·4	+ 3·4	6	0·66	+0·24
	Birmingham (Oscott)	54	32	44·1	+ 2·8	6	0·74	+0·18
	Shrewsbury ℳ	53	28	43·5	+ 1·5	6	0·77	+0·29
	Hereford ℳ	55	31	44·7	+ 2·6	7	1·01	+0·50
	Cirencester	52	32	43·1	+ 1·1	6	1·67	+1·10
	Oxford	55	32	44·2	+ 3·2	7	0·68	+0·28
5. ENGLAND, S.	London	55	32	46·3	+ 4·6	7	0·72	+0·33
	Marlborough ℳ	54	31	44·0	+ 2·0	7	1·13	+0·61
	Strathfield Turgiss ℳ	55	29	44·5	+ 2·9	7	1·26	+0·84
	Dover	49	39	44·2	+ 2·7	6	0·35	−0·08
	Hastings (St. Leonard's)	48	36	44·0	+ 2·1	6	0·75	+0·35
	Hurst Castle	51	36	43·9	+ 1·9	6	0·97	?
6. SCOTLAND, W.	Laudale (Loch Sunart)	49	33	43·0	+ 3·1	5	1·49	?
	Glasgow	50	41	44·6	+ 4·6	5	0·77	−0·13
	Ardrossan	49	38	44·3	+ 4·2	7	0·71	−0·05
	Silloth (Cumberland)	49	35	43·1	+ 2·4	4	0·85	+0·26
	Douglas (Isle of Man)	49	32	44·2	+ 2·3	5	0·72	−0·10
7. ENGLAND, N.W.	Stonyhurst	51	36	43·3	+ 2·4	6	1·34	+0·48
	Blackpool ℳ	50	32	43·4	+ 2·0	5	0·72	+0·19
	Manchester	52	31	42·7	+ 1·7	5	0·55	+0·02
	Liverpool Observatory (Bidston)	53	35	45·1	+ 3·1	5	0·25	−0·09
	Holyhead	51	39	45·3	+ 2·4	6	0·56	+0·03
8. ENGLAND, S.W.	Pembroke	49	37	45·2	+ 1·6	6	0·51	−0·19
	Barnstaple	57	39	48·8	+ 5·3	6	1·82	+1·11
	Falmouth	53	41	47·4	+ 2·3	6	1·31	+0·49
	Plymouth	54	36	47·2	+ 3·3	6	1·11	+0·31
	Prawle Point	52	37	46·1	+ 2·3	6	0·36	?
9. IRELAND, N.	Londonderry	53	35	44·8	+ 3·1	4	0·51	−0·15
	Mullaghmore	52	36	44·9	+ 3·0	6	0·54	?
	Markree Castle	52	29	43·7	+ 1·9	6	0·46	−0·24
	Brookeborough	52	36	44·1	+ 2·4	4	1·03	?
	Armagh	51	36	44·3	+ 2·8	5	0·39	−0·17
	Donaghadee	53	36	44·1	+ 2·6	5	0·58	?
10. IRELAND, S.	Dublin	53	40	46·4	+ 3·9	5	0·20	−0·20
	Parsonstown	54	34	43·5	+ 1·2	7	0·66	+0·17
	Roche's Point	51	39	45·6	+ 2·1	6	0·91	−0·04
	Valentia	54	39	47·4	+ 3·4	7	1·80	+0·76
	Foynes	55	34	45·3	+ 2·6	6	0·94	?
SCOTLAND, N.	Sumburgh Head *							
	Stornoway	47	35	42·5	+ 3·0	4	0·52	−0·52
	Wick	49	37	42·4	+ 3·1	6	0·37	−0·03
——	Scilly (St. Mary's)	54	44	48·6	+ 2·6	6	1·00	+0·34
	Jersey (Noirmont)	56	40	46·5	+ 2·9	6	1·55	+1·00

The observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.
The stations marked with "ℳ" are in connection with the Meteorological Society.
* Telegraphic communication with this station is interrupted.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending February 23, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, February 17.

Weather fine at a few western and south-western stations, but overcast or very cloudy generally, with rain over eastern and central England. Weather fine and bright during day in the E., but dull and rainy in the W.

Temperature fallen except in the Netherlands and N.E. of France. Readings low inland stations, ranging from 47° in the S.W. and S.E. to 36° at York. Maxima during day between 45° and 50°, minima not low.

Wind southerly and south-westerly at most of our own and the French stations, easterly over Scandinavia and the North Sea, and variable over the central and western parts of England. Blowing a gale over France, Scotland, and the eastern shores of the North Sea. Fresh southerly winds all day on our coasts and easterly gales in Norway.

Sea rough generally and tremendously high in the N.E.

Barometer rising over Sweden, France, and our S.W. coasts, fallen very quickly elsewhere. Pressure very high Lapland, with large depression off our western coasts and a small subsidiary depression over Yarmouth. Barometer falling again at Valentia at night, rising elsewhere.

Wednesday, February 18.

Weather fair at the majority of stations, but dull and rainy in the S. of England. Mist reported from several stations. Weather cloudy and changeable all day, with showers very generally.

Temperature little changed over Norway and Sweden, but several degrees lower over the Netherlands and E. France, and rather higher over these Islands. Readings ranging from 49° at Scilly to 40° at Nairn. Mild all day.

Wind westerly over France, south-westerly to southerly on our coasts and south-easterly over Norway and Sweden. Blowing a gale at the French and Scandinavian stations. Wind backing on our S.W. coasts later and rising to a gale.

Sea rough to high at our south-western and north-eastern ports.

Barometer rising briskly except over the Baltic. Pressure high over the Gulf of Bothnia, and moderately so over the Gulf of Lyons, with low readings off our N.W. coasts. Fresh fall commencing at Valentia later, and extending to our other western and northern coasts.

Thursday, February 19.

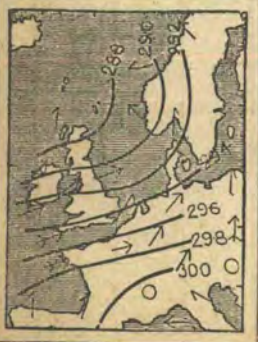
Weather fine in the E. of Ireland and N.E. of Great Britain, dull elsewhere, with rain over the N.W. of France, the S.E. of England, and N. Germany. Weather very showery and unsettled all day.

Temperature little changed over Scandinavia, risen elsewhere, —quickly in N. Germany. Readings ranging from 51° at Scilly to 40° at Nairn. Maxima between 45° and 50° generally.

Wind south-westerly to southerly at our own and the French stations, south-easterly in Norway and Sweden. Fresh or strong generally, and blowing a gale over the Channel, the Skager Rack, and Baltic. Wind veering later, but still blowing strong to a gale.

Sea high in the S.W. and N.E., rough generally.

Barometer falling in all parts of western Europe, though change very slight over France and our S.E. coasts. Large depression W. coast of Scotland. Disturbance moving northward later, barometer falling Hebrides, rising slowly elsewhere.



Friday, February 20.

Weather cloudy and showery on our W. coasts and dull on the Continent generally, fine in the E. of Great Britain. Cloudy in most places during day with showers in nearly all districts. Heavy hail in London.

Temperature readings scarcely changed in any part of western Europe, ranging from 50° at Scilly to 42° at Stornoway. Maxima between 50° and 55° except in N. Scotland and extreme S. of England.

Wind west-south-westerly generally, but southerly in Scotland and south-easterly in Scandinavia. Still blowing a gale in the Channel and freshly or strongly except in Scotland. Wind veering to W. subsequently. Gale holding at Scilly.

Sea high in the S.W. and rough except in the N.

Barometer falling briskly over Scandinavia, rising elsewhere. Depression shown to the northward of Scotland. Pressure increasing all day over these Islands—briskly in the W.—falling fast in Norway, and disturbance passing eastward to that country.

(*Continued over.*)

(Continued.)

Synoptic Weather Charts.—8 a.m.

Barometer and Wind.	Cloud, Rain, Sea, and Temperature.	**Weather** during the 24 hours succeeding the date of the Charts

Saturday, February 21.

Weather dull and rainy or misty in the N.W. of France and dull over Norway and Sweden, fine in nearly all other places. Sky becoming more cloudy later in the day and showers occurring generally.

Temperature fallen in almost all places—several degrees over central England and Ireland. Readings ranging from 48° in London to 35° at Parsonstown. Maxima below 50° generally, and slight frost at inland stations at night.

Wind northerly in the Hebrides and Shetlands, and southerly at Skudesnaes, westerly elsewhere. Moderate to light in force, veering to N. at most Scotch stations later, and towards N.W. on most coasts.

Sea rough in the S.W. and extreme N.

Barometer risen everywhere—quickly in the N. and N.W. Depression shown between the Shetlands and W. coast of Norway. Disturbance moving slowly southward later, but mercury still rising everywhere.

Sunday, February 22.

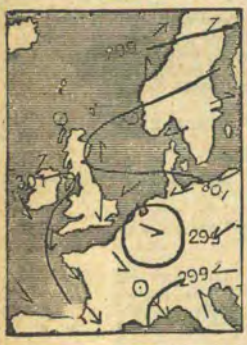
Weather fine in the E. of Ireland and the south-eastern and central parts of England, dull in nearly all other places, with rain in the N.E. of England and at Hurst Castle. Weather cloudy all day except in the E.

Temperature risen slightly in the W., fallen several degrees in the E. and S. Readings ranging from 46° in the S.W. to 32° at Nottingham and Cambridge. Rather low all day in the S.E.

Wind north-easterly in Scotland, northerly over Ireland, and westerly over France and the Channel, moderate in force. Light variable airs over central and eastern England. No change during day.

Sea rough on our S.W. coasts and in the Straits of Dover.

Barometer falling over France, rising in all other places—rapidly in the N. Large area of low pressure over England and the North Sea, and moving slowly southward. Pressure increasing all day.



Monday, February 23.

Weather, though locally clear in a few places, dull or very cloudy generally with rain in the E. and S.E. Weather fine in the W. and N. later but rain continuing in the S.E.

Temperature fallen a little in most places. Readings ranging from 47° at Scilly to 32° at York. Slight frost over central England and temperature low all day over eastern and central districts.

Wind southerly in the E. of Scotland and N. of Ireland, northerly over England, and northerly to north-westerly over France. Blowing freshly in the S.W., light or moderate elsewhere. Little change later beyond gradual spreading southward of the southerly wind.

Sea rough near Scilly.

Barometer risen everywhere. Areas of high pressure over Scandinavia and the North Sea and off our S.W. coasts, with low pressures over France and to the northward of Scotland. Very little change during day.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

(Signed) ROBERT H. SCOTT,
Secretary.

Meteorological Office,
116, Victoria Street, S.W.

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The black dots show the positions of the Stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn; Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations 1857–69, as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866–75. A rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for Week.
Principal Wheat-producing Districts.	1. SCOTLAND, EAST	55	28	42	2 above.	5	6	0 (average).
	2. ENGLAND, NORTH-EAST	58	30	43	2 above.	2	1	3 less.
	3. ENGLAND, EAST	56	28	42	1 above.	3	1	3 less.
	4. MIDLAND COUNTIES	56	26	43	1 above.	4	2	2 less.
	5. ENGLAND, SOUTH	55	28	43	1 above.	4	2	2 less.
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	53	29	43	2 above.	6	9	2 more.
	7. ENGLAND, NORTH-WEST	53	30	43	1 above.	5	9	4 more.
	8. ENGLAND, SOUTH-WEST	53	29	44	0 (average).	5	4	4 less.
	9. IRELAND, NORTH	55	33	44	3 above.	6	9	2 more.
	10. IRELAND, SOUTH	54	30	45	2 above.	5	8	1 more.

General Remarks.

Weather has been very boisterous, changeable, and showery in all the western and northern parts of the kingdom, with some hail and snow at many of the Irish, Scotch, and northern English stations; in the E. and S., however, the weather, though squally and unsettled, was less disturbed, and the amount of rainfall was comparatively slight.

Temperature about equal to the mean in "England, S.W.," but slightly above it in all other districts, the excess being greatest (3°) in "Ireland, N." The highest of the maxima were registered in most places on the 28th or 29th; at Durham the thermometer went as high as 58°, but no higher than 55° or 56° at any other station. A rather sharp frost occurred over central and eastern England on the 25th, the lowest reading observed being 26° at Shrewsbury.

Wind at the commencement of the period was northerly or north-easterly, but from the 25th to the 28th it varied in direction between W. and N.W., and on the two following days between W. and S.W. In force it was (except on the 24th) fresh or strong very generally; hard gales were frequently experienced on all our western and northern coasts, and occasionally in the S. and S.E. also.

Rainfall rather more than the mean in Ireland, in "Scotland, W.," and "England, N.W.," equal to the mean in "Scotland, E.," and below it in all other parts of the country.

The data from which the summary on the preceding page has been calculated are as follow :

Districts.	Names of Stations.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean
		°	°	°	°		Inches.	Inches.
1. SCOTLAND, E.	Nairn	52	28	40·8	+ 1·4	6	0·69	+0·40
	Aberdeen	55	32	42·2	+ 2·4	6	0·21	−0·29
	Glenalmond	51	31	42·1	+ 2·3	5	1·06	?
	Leith	53	35	43·7	+ 3·5	4	0·28	−0·03
2. ENGLAND, N.E.	Shields	52	33	43·3	+ 3·3	2	0·02	−0·38
	Durham	58	31	42·7	+ 2·7	2	0·06	−0·41
	York	54	31	43·1	+ 2·5	3	0·05	−0·38
	Spurn Head	52	35	43·2	+ 3·1	2	0·03	?
	Kelstern (Lincolnshire) ℳ	52	30	40·8	0·0	2	0·20	−0·20
3. ENGLAND, E.	Yarmouth	53	31	41·4	+ 0·6	1	0·01	−0·49
	Cambridge	56	28	43·0	+ 1·8	2	0·09	−0·26
	Rothamsted	52	29	41·9	+ 0·7	6	0·14	−0·27
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	54	32	43·9	+ 3·1	3	0·41	+0·06
	Nottingham	56	28	42·4	+ 1·3	5	0·15	−0·27
	Loughborough	53	30	42·6	+ 1·5	4	0·22	−0·18
	Leicester	53	31	43·0	+ 1·6	4	0·13	−0·27
	Birmingham (Oscott)	52	31	41·5	+ 0·3	5	0·28	−0·26
	Shrewsbury ℳ	53	26	42·0	− 0·4	4	0·27	−0·18
	Hereford ℳ	52	28	43·4	+ 1·1	4	0·15	−0·31
	Cirencester	49	27	40·9	− 1·2	4	0·30	−0·20
	Oxford	52	30	42·5	+ 0·4	3	0·06	−0·34
5. ENGLAND, S.	London	55	28	43·5	+ 1·4	4	0·16	−0·19
	Marlborough ℳ	52	28	42·2	− 0·1	5	0·34	−0·16
	Strathfield Turgiss ℳ	53	28	43·2	+ 1·3	4	0·26	−0·14
	Dover	52	34	42·1	+ 0·1	5	0·21	−0·21
	Hastings (St. Leonard's)	52	32	42·6	0·0	5	0·12	−0·28
	Hurst Castle	50	33	43·0	+ 0·8	3	0·27	?
6. SCOTLAND, W.	Laudale (Loch Sunart)	49	34	42·2	+ 2·3	7	*4·00	?
	Glasgow	51	34	43·2	+ 3·2	5	1·02	+0·22
	Ardrossan	53	36	43·7	+ 3·3	6	1·40	+0·71
	Silloth (Cumberland)	50	29	41·9	+ 1·1	5	0·51	−0·01
	Douglas (Isle of Man)	50	30	43·1	+ 1·1	6	0·68	−0·07
7. ENGLAND, N.W.	Stonyhurst	48	34	42·1	+ 0·9	6	1·42	+0·58
	Blackpool ℳ	48	30	41·9	+ 0·2	6	0·90	+0·39
	Manchester	49	35	41·3	+ 0·1	2	1·20	+0·70
	Liverpool Observatory (Bidston)	53	35	43·5	+ 1·4	4	0·47	+0·16
	Holyhead	51	36	43·8	+ 0·8	5	0·61	+0·11
8. ENGLAND, S.W.	Pembroke	48	35	43·7	− 0·1	6	0·20	−0·45
	Barnstaple	53	29	45·2	+ 1·6	5	0·48	−0·18
	Falmouth	52	35	44·9	− 0·4	5	0·46	−0·33
	Plymouth	53	32	44·2	+ 0·2	3	0·27	−0·46
	Prawle Point	51	32	42·6	− 1·4	6	0·43	?
9. IRELAND, N.	Londonderry	51	34	44·3	+ 2·8	6	1·01	+0·41
	Mullaghmore	52	36	44·5	+ 2·5	7	1·33	?
	Markree Castle	55	33	46·6	+ 4·6	6	0·91	+0·20
	Brookeborough	53	33	44·0	+ 2·2	6	1·08	?
	Armagh	51	34	43·0	+ 1·3	5	0·58	+0·07
	Donaghadee	53	36	44·0	+ 2·2	6	0·34	?
10. IRELAND, S.	Dublin	54	35	45·2	+ 2·6	3	0·64	+0·25
	Parsonstown	53	30	43·5	+ 1·0	6	1·68	+1·19
	Roche's Point	52	39	45·6	+ 1·6	3	0·27	−0·63
	Valentia	53	37	47·0	+ 3·0	6	0·50	−0·50
	Foynes	53	35	44·5	+ 1·5	5	0·77	?
SCOTLAND, N.	Sumburgh Head							
	Stornoway	49	30	40·6	+ 1·1	7	1·95	+0·95
	Wick	49	30	39·6	+ 0·2	7	0·86	+0·47
——	Scilly (St. Mary's)	52	40	46·8	+ 0·3	5	0·36	−0·21
	Jersey (Noirmont)	50	37	43·7	+ 0·7	3	0·07	−0·52

The observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.
The stations marked with "ℳ" are in connection with the Meteorological Society.
* The rainfall at Laudale is so exceptional that it has been omitted in calculating the average for the district "Scotland, W."

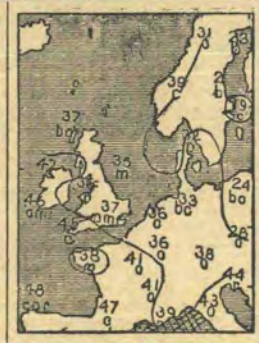
II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending March 1, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.



Tuesday, February 24.

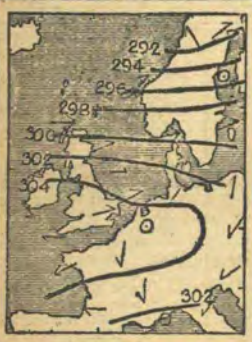
Weather fine in Wales and at some Scotch stations, cloudy or dull generally, with rain at Valentia. Sky overcast all day in the south-east, generally fair and dry elsewhere.

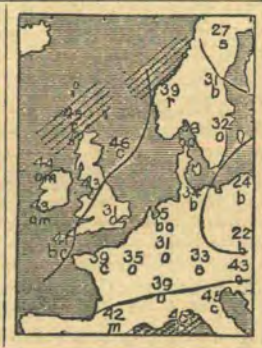
Temperature risen fast in Sweden, fallen somewhat in most other parts of the Continent and on our western and northern coasts, changed little elsewhere. Readings ranging from 46° at Valentia to 35° at Aberdeen. Temperature low all day, particularly in S.E.

Wind light from W. to S.W. in the N. and over Scandinavia, light from N.E. over England, and moderate to fresh from N. to N.W. in France. Westerly wind in the N. spreading southward during day.

Sea nearly smooth.

Barometer falling a little at Christiansund, rising in all other places. Pressure high and very uniform these Islands, low over northern Norway and south-eastern France. Mercury falling quickly in Norway later, and fall spreading to our northern coasts.





Wednesday, February 25.

Weather cloudy or dull in the N., with rain at Stornoway, but fine in the E. and S. and over the Netherlands. Rainy and squally in the N. all day, but fine in the S.

Temperature risen at our northern stations and over Norway, fallen several degrees in the S. and over France. Readings ranging from 46° in N. Scotland to 31° in the S.E. of England. Thermometer rising briskly in S. later.

Wind westerly on most of our coasts and south-westerly in Scandinavia, but northerly breezes reported over the Channel and easterly winds in France; blowing strongly in the Hebrides, but moderate or light elsewhere. Westerly wind veering and increasing during day and rising to a gale in the N. at night.

Sea rough at Stornoway.

Barometer falling very quickly over Norway and Sweden, and briskly in Scotland, rising elsewhere. Readings highest over our S.W. coasts, with large depression over the N. of Norway. Fall becoming very brisk in Scotland at night and gradients increasing.

Thursday, February 26.

Weather fine in all the more northern parts of England, the S. of Scotland, and E. of Ireland, dull or very cloudy generally, with snow in the N.E. Snow squalls in Scotland all day, but weather moderately fair generally.

Temperature risen several degrees at our southern stations, changed little over France, and fallen considerably in the N. Readings ranging from 48° at Scilly to 36° at Aberdeen. Weather cold all day.

Wind westerly at our southern stations, and south-westerly on the eastern shores of the North Sea, north-westerly elsewhere. Fresh in force generally, and blowing a fresh to hard gale on our northern coasts. Gale holding in the N. all day, and wind veering to N.W. in the S.

Sea rough in the W. and S., and high in the N.W.

Barometer fallen everywhere,—briskly generally, and rapidly on both shores of the North Sea. Pressure highest over North Sea, with deep depression over Scandinavia, and small disturbance on our S.W. coasts. Mercury rising slowly later, and small depression passing southward over Bay of Biscay.

Friday, February 27.

Weather fine on our E. and S. coasts, over the N. of France, the Netherlands, and the Skager Rack, cloudy or dull elsewhere. Weather fine in the E. and S.E. all day, but dull generally, with rain in the N.

Temperature rather higher in the W. of France, but lower in most other places. Readings ranging from 47° at Scilly, to 34° in N. Scotland. Thermometer rising considerably later, and maxima between 45° and 50°.

Wind westerly on most of our coasts, but north-westerly over the Channel, France, and the countries to the eastward of the North Sea. Moderate to fresh in force generally, but blowing a gale at Cuxhaven and Christiansund. Wind backing to S.W. on our western coasts later.

Sea rough in the S.W., N.W., and N.E.

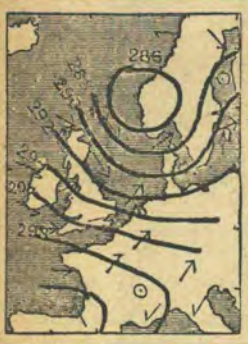
Barometer rising in Scandinavia, but falling in all other places. Area of high pressure off our S.W. coasts, with large depression over Norway. Barometer falling all day, and fresh disturbance appearing on our N.W. coasts.

(Continued over.)

(*Continued.*)

Synoptic Weather Charts.—8 a.m.

Barometer and Wind.	Cloud, Rain, Sea, and Temperature.	**Weather** during the 24 hours succeeding the date of the Charts



Saturday, February 28.

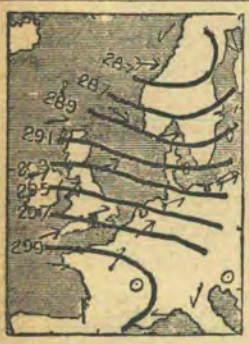
Weather fine over the E. coast of England and the greater part of Scotland, dull or very cloudy elsewhere, with rain at some western stations and in N. Germany. Fair all day E., squally and rainy elsewhere.

Temperature risen briskly everywhere. Readings uniform, ranging from 49° in the S.W. to 37° in the Shetlands. Temperature moderately high all day. Maxima exceeding 50°.

Wind north-westerly in Scotland and N. of England, westerly on our other coasts and over France, and south-westerly on the eastern shores of the North Sea. Blowing a gale in Scotland and strongly generally. Wind moderating later but not changing much.

Sea rough except off the E. of Scotland and the Irish coasts.

Barometer fallen quickly over the whole of western Europe, but beginning to rise in N.W. Large depression between Norway and Shetlands and smaller disturbances crossing us. Pressure increasing generally all day but slight decrease at Stornoway.



Sunday, February 29.

Weather fine on our S.E. coasts, cloudy and unsettled elsewhere, with rain showers in the W. and snow in the Shetlands. Snow all day in extreme N. and weather cloudy and showery except in N.E.

Temperature risen a little in most places. Readings ranging from 51° at Shields to 36° at Sumburgh Head. Temperature again high all day, maxima exceeding 50° except on the S. coast of England.

Wind westerly all over these Islands, France, and the North Sea. Blowing strongly on our western and northern coasts and reaching a gale in Norway. Backing to S.W. and blowing a gale in Ireland later.

Sea rough W. and N.

Barometer risen over France, N. Germany, and our south-eastern stations, fallen elsewhere. Large depression over Norway. Fresh disturbance appearing in the W. in the evening and barometer falling fast there.

Monday, March 1.

Weather dull and rainy on our extreme western coasts and over the S. of England and the N. of France, moderately fine in most other places. Hail showers in the W. during day but weather fair in the E.

Temperature risen in the S.E., fallen elsewhere. Readings uniform, ranging from 48° at Scilly to 38° at Parsonstown. Temperature rather low all day.

Wind westerly at our own and the French stations, southerly on the eastern shores of the North Sea, and easterly at Christiansund. Blowing a gale at nearly all our stations and lasting all day.

Sea high in the N.W. and W., rough except in the E.

Barometer fallen over the whole of western Europe, the change exceeding three-quarters of an inch in the Hebrides. Large depression to the northward of Scotland, travelling slowly eastward later. Small subsidiary disturbances appearing in W. at night.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⇛ = a heavy gale; ➔ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

(Signed) ROBERT H. SCOTT,
Secretary.

Meteorological Office,
116, Victoria Street, S.W.

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WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. NO. 10.] WEEK ENDING MONDAY, MARCH 8, 1880. [*Price 2d.*

[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE AND RAINFALL IN THE UNITED KINGDOM FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the Stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations 1857-69, as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for Week.
Principal Wheat-producing Districts.	1. SCOTLAND, EAST	57	31	43	3 above.	3	3	1 less.
	2. ENGLAND, NORTH-EAST	60	30	45	5 above.	3	6	2 more.
	3. ENGLAND, EAST	62	34	47	6 above.	3	5	1 more.
	4. MIDLAND COUNTIES	60	29	47	5 above.	3	7	2 more.
	5. ENGLAND, SOUTH	60	34	48	5 above.	3	5	1 more.
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	56	30	44	3 above.	5	13	4 more.
	7. ENGLAND, NORTH-WEST	56	32	45	3 above.	4	13	8 more.
	8. ENGLAND, SOUTH-WEST	57	36	48	4 above.	6	8	0 (average).
	9. IRELAND, NORTH	55	32	45	3 above.	5	11	5 more.
	10. IRELAND, SOUTH	59	33	48	4 above.	4	9	3 more.

General Remarks.

Weather dull, rainy, and unsettled at first, but subsequently improving, the sky clearing at intervals in most places; on the 8th the weather was fine and bright in nearly all parts of the kingdom. Snow and hail showers were experienced over the N. of England and in Ireland at the commencement of the period; lightning was seen in several parts of the country on the first few days, and a thunderstorm occurred at Mullaghmore during the night of the 2nd.

Temperature above the mean for the time of year in all districts; as much as 5° or 6° in excess over the greater part of England and 3° or 4° elsewhere. At many stations in central, eastern, and southern England the maxima were 60° or a little above on the 5th, and again in some places on the 7th, while the lowest readings were registered on the 2nd or 8th.

Wind between S. and W. during the first five days, and generally strong to a gale; but by the 7th it had veered to N.N.W. (except in the S.E.) and moderated. On the 8th it had shifted temporarily to N.E. over England, to S.E. or S. in Ireland, and to S. in Scotland, but was light to moderate in force.

Rainfall more than the mean in all districts except "Scotland, E.," where it was slightly less. The bulk of the fall took place during the first few days.

The data from which the summary on the preceding page has been calculated are as follow :

Districts.	Names of Stations.	Temperature.				Rainfall.		
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean
		°	°	°	°		Inches.	Inches.
1. SCOTLAND, E.	Nairn	56	32	42·6	+ 3·3	3	0·26	−0·03
	Aberdeen	54	33	43·5	+ 3·5	0	—	−0·49
	Glenalmond							
	Leith	57	31	43·3	+ 2·9	5	0·57	+0·27
2. ENGLAND, N.E.	Shields	57	36	44·8	+ 4·6	4	0·86	+0·51
	Durham	60	31	45·2	+ 5·0	3	0·30	−0·16
	York	58	30	45·8	+ 5·1	3	0·52	+0·11
	Spurn Head	53	33	45·1	+ 4·7	3	0·89	?
	Kelstern (Lincolnshire) ℳ	55	32	44·7	+ 3·6	2	0·62	+0·23
3. ENGLAND, E.	Yarmouth	58	36	46·7	+ 5·5	2	0·45	−0·01
	Cambridge	62	34	48·1	+ 6·5	4	0·57	+0·24
	Rothamsted	57	35	47·5	+ 5·9	4	0·41	+0·01
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	60	29	46·5	+ 5·6	3	0·83	+0·49
	Nottingham	60	33	46·9	+ 5·4	3	1·11	+0·70
	Loughborough	58	33	48·2	+ 6·7	3	0·48	+0·08
	Leicester							
	Birmingham (Oscott)	57	33	47·1	+ 5·5	2	0·27	−0·27
	Shrewsbury ℳ	54	31	46·1	+ 3·6	2	0·40	0·00
	Hereford ℳ	58	34	48·3	+ 5·7	4	0·39	−0·02
	Cirencester	55	35	45·9	+ 3·9	4	1·29	+0·82
	Oxford	56	36	48·3	+ 6·1	3	0·58	+0·18
5. ENGLAND, S.	London	60	37	49·3	+ 6·8	2	0·37	+0·03
	Marlborough ℳ	56	34	48·0	+ 5·4	5	0·78	+0·33
	Strathfield Turgiss ℳ	56	35	48·5	+ 6·3	3	0·47	−0·11
	Dover	54	38	46·4	+ 4·2	3	0·35	−0·08
	Hastings (St. Leonard's)	52	38	46·3	+ 3·3	3	0·49	+0·09
	Hurst Castle	51	? 40	46·4	+ 3·9	4	0·47	?
6. SCOTLAND, W.	Laudale (Loch Sunart)	52	32	43·9	+ 3·9	6	2·20	?
	Glasgow	52	34	43·8	+ 3·6	6	1·20	+0·51
	Ardrossan	51	36	42·9	+ 2·3	5	1·08	+0·47
	Silloth (Cumberland)	56	30	44·5	+ 3·5	3	0·89	+0·41
	Douglas (Isle of Man)	54	32	44·6	+ 2·4	4	0·96	+0·26
7. ENGLAND, N.W.	Stonyhurst	53	32	44·4	+ 2·9	5	1·92	+1·11
	Blackpool ℳ	53	32	43·9	+ 1·9	4	0·99	+0·49
	Manchester	55	32	45·5	+ 4·1	4	1·67	+1·17
	Liverpool Observatory (Bidston)	56	33	46·4	+ 4·2	3	0·99	+0·69
	Holyhead	53	36	45·7	+ 2·6	4	0·88	+0·39
8. ENGLAND, S.W.	Pembroke	53	36	45·8	+ 2·8	6	0·55	−0·07
	Barnstaple	55	40	50·3	+ 6·4	6	0·61	−0·01
	Falmouth	55	38	49·0	+ 3·5	6	1·03	+0·28
	Plymouth	57	39	49·0	+ 4·9	5	0·50	−0·19
	Prawle Point	53	36	47·4	+ 3·3	6	1·22	?
9. IRELAND, N.	Londonderry	53	34	44·6	+ 3·0	5	1·21	+0·62
	Mullaghmore	54	35	45·7	+ 3·7	5	1·44	?
	Markree Castle	55	32	46·1	+ 4·1	6	1·11	+0·39
	Brookeborough	53	34	44·4	+ 2·5	4	1·11	?
	Armagh	53	33	44·9	+ 2·9	5	0·87	+0·40
	Donaghadee	55	35	44·6	+ 2·6	5	0·57	?
10. IRELAND, S.	Dublin	58	34	47·4	+ 4·6	4	1·02	+0·64
	Parsonstown	56	33	46·9	+ 4 3	4	1·18	+0·68
	Roche's Point	58	36	48·1	+ 3·9	5	1·26	+0·41
	Valentia	55	35	48·8	+ 4·7	5	0·43	−0·53
	Foynes	59	34	47·7	+ 4·7	3	0·39	?
SCOTLAND, N.	Sumburgh Head	49	34	40·8	+ 2·4	6	0·64	+0·21
	Stornoway	50	33	41·2	+ 1·7	3	0·40	−0·59
	Wick	55	28	41·5	+ 2·0	2	0·15	−0·20
——	Scilly (St. Mary's)	56	40	48·6	+ 6·7	6	0·65	+0·12
	Jersey (Noirmont)	53	39	48·1	+ 3·9	5	0·33	−0·32

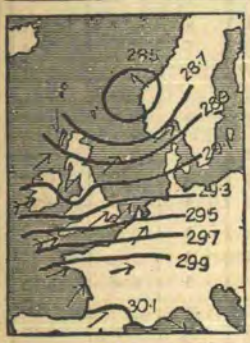
The observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.
The stations marked with "ℳ" are in connection with the Meteorological Society.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending March 8, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.



Tuesday, March 2.

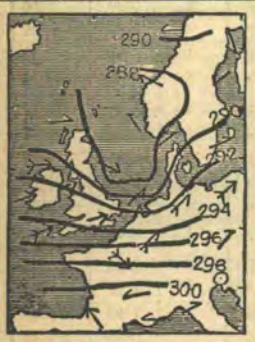
Weather fine in parts of Scotland and N. Germany, dull generally, with heavy snow and rain in the N. of England, and mist in many places. Dull, showery, and unsettled except in Scotland all day.

Temperature fallen except in the S.W., rapidly in N. England. Readings ranging from 51° at Valentia to 38° at Nottingham and Liverpool. Thermometer rising briskly later, but maxima not exceeding 50° except in the S.W.

Wind south-westerly on nearly all coasts, but south-easterly in N.W. England and N.W. in N. Scotland; fresh or strong in force generally, and blowing a gale on our W. and S. coasts. Fresh to strong gale in S. all day.

Sea rough to high on all but our northern coasts.

Barometer rising briskly on our northern coasts, and slightly over France, falling elsewhere. Small depression passing from W. to E. shown over N. Wales, with large depression near the Shetlands. Fresh disturbance appearing over N. Ireland later.



Wednesday, March 3.

Weather fine in the northern parts of Scotland and the S.E. of France, dull and very unsettled elsewhere, with rain, fog, or mist in many parts of the country. Very squally and unsettled all day.

Temperature fallen on our S.W. and N. coasts, risen briskly elsewhere; readings ranging from 50° at Scilly to 33° at Nairn. Further rise later, and mild day. Maxima exceeding 50° in our midland and western districts.

Wind light from N.W. in Scotland and from S.E. in Norway, but westerly over Ireland, England, and N. Germany. Blowing fresh to strong gale at all our southern and eastern stations and over N. France. Gale falling off a good deal at night, but still holding in Channel.

Sea high in the Channel and off the N.E. of England; rough in the W.

Barometer rising on our western and northern coasts, falling elsewhere. Readings highest over the S. of France, with large depression over the North Sea. Gradients very steep in the S.E. Pressure increasing everywhere later.

Thursday, March 4.

Weather cloudy at some of our western and south-western stations and dull and rainy over France, fine and bright elsewhere. Sky becoming very cloudy except in the E. later, with drizzling rain in the W. of Ireland.

Temperature risen a little in the N. and fallen in the S. of the British Isles, changed little elsewhere. Readings ranging from 50° at Scilly to 35° at Wick. Day mild, maxima between 50° and 55° generally.

Wind westerly over nearly the whole of western Europe, moderate to fresh in force generally but blowing strongly in the N.W. and N.E. Wind backing to S. in Ireland later but still westerly in the E. and S.

Sea high in the Bay of Biscay, rough on our S.W. coasts as well as off Mullaghmore and Spurn Head.

Barometer rising briskly over the whole of western Europe. Readings highest near Biarritz, lowest near Christiansund, with rather steep gradients over these Islands. Slight decrease at Valentia later, but barometer rising steadily elsewhere.

Friday, March 5.

Weather cloudy or dull in nearly all places, with rain in N. England and S. Scotland, and fog and mist in several places. Sky cloudy or overcast all day.

Temperature changed little over France, but risen several degrees over these Islands. Weather very mild over England, readings ranging from 54° at Liverpool to 38° at Nairn. Maximum in London 60°, and at Cambridge 62°.

Wind westerly over these Islands and the greater part of France and the North Sea. Light in the N., but fresh or strong in the S. Wind backing in the W. later, and increasing in force.

Sea rough in the W. and S.

Barometer risen everywhere,—briskly at our northern stations, and quickly in Norway. Readings highest over Bay of Biscay, low and very uniform over Scotland and Norway. Pressure decreasing a little in Ireland later.

(*Continued over.*)

(*Continued.*)

Synoptic Weather Charts.—8 a.m.		**Weather** during the 24 hours succeeding the date of the Charts
Barometer and Wind.	Cloud, Rain, Sea, and Temperature.	
		Saturday, March 6. *Weather* fine on the E. coast of England and W. of France, but dull generally, with rain in the Shetlands and Hebrides. Sky clearing in the S.E. later, but overcast elsewhere, and rain extending to Ireland. *Temperature* risen considerably in Scotland, and slightly in N. Germany, fallen a little elsewhere. Readings high and uniform, varying between 47° and 51°. Not much change during day. *Wind* southerly and strong to a gale at our extreme south-western and western stations, and moderate to fresh from S.W. elsewhere. Gale holding in the W. till evening, then subsiding slowly; little other change. *Sea* rough in the W. and N.W., high off Valentia. *Barometer* falling in the W. and N. of these Islands and France, and over Scandinavia, rising elsewhere. Anti-cyclone over France, and depressions off the N.W. of Scotland and over N. Sweden. Pressure giving way all day—most in the Shetlands.
		Sunday, March 7. *Weather* fine in Scotland, cloudy or dull elsewhere, with rain, fog, or mist in several parts of the country. Weather fine and bright all day in the N. and N.E., but dull in the S., with fog, gloom, and rain. *Temperature* fallen briskly in nearly all districts; readings ranging from 38° to 48°. Readings uniform all day between 45° and 50°. *Wind* fresh from N. to N.W. on our western and northern coasts, westerly over the Bay of Biscay and moderate south-westerly over the S.E. of England and the southern portion of the North Sea. Wind light and variable over England during day and backing to S.W. in the N.W. in the evening. *Sea* rough in the S.W. and N. *Barometer* risen fast on our northern and western coasts, fallen in the S. and E. and over Scandinavia. Readings highest in S. France, with large depression over Norway and small one on our S.W. coasts. Both disturbances moving eastward later and barometer rising.
		Monday, March 8. *Weather* dull on our western coasts and on the Continent generally, fine and bright over the greater part of these Islands. Some mist prevailing in the S. Fine all day in most districts but some rain falling in S.W. *Temperature* risen in the N., fallen elsewhere, quickly in the E. of England and over Sweden. Readings ranging from 49° at Valentia to 33° at York. Thermometer rather low all day in the E. and S.E. *Wind* light and variable over our central districts, with moderate to fresh north-easterly breezes in the S. and over the Channel, and south-westerly breezes in the N. Little change during day. *Sea* slight. *Barometer* risen everywhere—very rapidly over Scandinavia, quickly on our coasts and slightly over France. Anti-cyclone formed over Sweden, and readings high and uniform over the whole of our area. Slight decrease of pressure in S. and S.W. later.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⇛ = a heavy gale; ➔ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

(Signed) ROBERT H. SCOTT,
Secretary.

Meteorological Office,
116, Victoria Street, S.W.

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WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 11.] WEEK ENDING MONDAY, MARCH 15, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE AND RAINFALL IN THE UNITED KINGDOM FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the Stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations 1857–69, as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866–75. A rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for Week.
Principal Wheat-producing Districts.	1. SCOTLAND, EAST	54	30	41	1 above.	4	8	2 more.
	2. ENGLAND, NORTH-EAST	57	31	41	0 (average).	3	3	1 less.
	3. ENGLAND, EAST	60	29	45	3 above.	2	less than ½	4 less.
	4. MIDLAND COUNTIES	58	30	43	1 above.	2	2	2 less.
	5. ENGLAND, SOUTH	63	32	46	4 above.	1	less than ½	3 less.
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	55	31	43	2 above.	2	9	5 more.
	7. ENGLAND, NORTH-WEST	54	31	43	1 above.	3	3	2 less.
	8. ENGLAND, SOUTH-WEST	59	36	47	3 above.	4	3	3 less.
	9. IRELAND, NORTH	56	30	44	2 above.	3	4	3 less.
	10. IRELAND, SOUTH	57	30	46	3 above.	5	9	4 more.

General Remarks.

Weather, though foggy or hazy at the southern and south-eastern stations, has been generally fine and very dry over England; cloudy and rather rainy in Scotland; dull and showery over the greater part of Ireland.

Temperature about equal to the mean in "England, N.E.," but a little above it in all other districts. The highest readings (63° at Strathfield Turgiss and 60° at some other stations) occurred on the 11th, 12th, or 13th, while the lowest were at the commencement or end of the period.

Wind easterly or south-easterly over the whole country, and though generally light in force, blew freshly at times from the south-eastward on our W. and S.W. coasts.

Rainfall rather more than the mean in "Ireland, S.," and over Scotland, but less in all the English districts.

The data from which the summary on the preceding page has been calculated are as follow :

Districts.	Names of Stations.	Temperature.				Rainfall.		
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean
		°	°	°	°		Inches.	Inches.
1. SCOTLAND, E.	Nairn	52	34	42·4	+ 3·0	2	0·56	+0·26
	Aberdeen	53	33	41·8	+ 1·5	5	0·57	+0·12
	Glenalmond	51	30	38·6	− 1·4	4	1·26	?
	Leith	54	31	41·9	+ 1·4	4	0·63	+0·34
2. ENGLAND, N.E.	Shields	53	35	41·9	+ 1·3	3	0·28	−0·07
	Durham	57	32	40·9	+ 0·4	4	0·37	−0·06
	York	56	31	41·3	+ 0·3	3	0·17	−0·22
	Spurn Head	50	35	40·9	0·0	4	0·38	?
	Kelstern (Lincolnshire) ℳ	56	32	40·5	− 0·8	2	0·38	+0·03
3. ENGLAND, E.	Yarmouth	57	35	46·7	+ 4·9	2	0·03	−0·39
	Cambridge	60	29	43·9	+ 2·2	1	0·01	−0·29
	Rothamsted	56	29	43·9	+ 1·8	2	0·02	−0·37
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	53	31	42·2	+ 1·2	1	0·38	+0·04
	Nottingham	56	31	43·3	+ 1·8	1	0·26	−0·15
	Loughborough	58	32	43·2	+ 1·7	1	0·25	−(
	Leicester	57	33	43·5	+ 1·8	2	0·23	−0·13
	Birmingham (Oscott)	55	31	41·6	− 0·3	2	0·04	−0·48
	Shrewsbury ℳ	55	30	41·4	− 1·0	4	0·12	−0·22
	Hereford ℳ	54	31	42·6	0·0	3	0·16	−0·24
	Cirencester	56	34	44·8	+ 2·5	2	0·08	−0·36
	Oxford	57	32	44·8	+ 2·5	2	0·46	+0·02
5. ENGLAND, S.	London	60	34	46·4	+ 3·8	0	—	−0·33
	Marlborough ℳ	60	33	46·6	+ 3·6	1	0·26	−0·09
	Strathfield Turgiss ℳ	63	32	47·1	+ 4·6	0	—	−0·35
	Dover	52	40	45·7	+ 3·1	0	—	−0·44
	Hastings (St. Leonard's)	57	40	47·6	+ 4·2	0	—	−0·41
	Hurst Castle	54	? 37	? 45·2	+ 2·2	0	—	?
6. SCOTLAND, W.	Laudale (Loch Sunart)	55	36	44·7	+ 4·4	3	0·46	?
	Glasgow	50	31	42·0	+ 1·6	3	1·16	+0·56
	Ardrossan	51	34	42·4	+ 1·4	2	1·52	+0·96
	Silloth (Cumberland)	52	32	43·3	+ 2·3	1	0·29	−0·14
	Douglas (Isle of Man)	49	36	43·1	+ 0·6	2	1·29	+0·66
7. ENGLAND, N.W.	Stonyhurst	50	33	42·3	+ 0·6	4	0·34	−0·42
	Blackpool ℳ	54	31	42·9	+ 1·0	2	0·40	−0·07
	Manchester	52	31	42·4	+ 0·6	2	0·15	−0·34
	Liverpool Observatory (Bidston)	53	34	42·7	+ 0·4	2	0·26	−0·05
	Holyhead	53	39	46·1	+ 2·9	4	0·51	+0·05
8. ENGLAND, S.W.	Pembroke	52	41	45·7	+ 1·6	4	0·65	+0·05
	Barnstaple	59	39	49·3	+ 6·3	3	0·14	−0·45
	Falmouth	53	43	47·4	+ 2·0	7	0·38	−0·32
	Plymouth	57	39	47·4	+ 3·1	3	0·08	−0·57
	Prawle Point	53	36	45·7	+ 1·2	4	0·05	?
9. IRELAND, N.	Londonderry	55	32	44·8	+ 3·0	2	0·21	−0·35
	Mullaghmore	56	37	45·6	+ 3·6	2	0·12	?
	Markree Castle	56	30	44·4	+ 2·3	4	0·19	−0·53
	Brookeborough	53	32	43·7	+ 1·6	3	0·61	?
	Armagh	53	32	44·5	+ 2·5	4	0·56	+0·13
	Donaghadee	50	36	43·0	+ 1·0	3	0·95	?
10. IRELAND, S.	Dublin	52	37	44·7	+ 1·8	5	1·00	+0·60
	Parsonstown	56	30	44·5	+ 1·9	3	0·59	+0·05
	Roche's Point	54	40	47·7	+ 4·2	6	1·36	+0·55
	Valentia	54	37	47·8	+ 4·4	7	1·38	+0·44
	Foynes	57	34	45·6	+ 2·5	3	0·11	?
SCOTLAND, N.	Sumburgh Head	48	36	41·7	+ 3·3	4	1·15	+0·79
	Stornoway	50	35	44·0	+ 4·5	1	0·25	−0·70
	Wick	52	32	41·0	+ 1·6	2	0·84	+0·52
——	Scilly (St. Mary's)	55	45	49·1	+ 1·9	3	0·27	−0·23
	Jersey (Noirmont)	63	42	49·0	+ 4·5	2	0·33	−0·39

The observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.
The stations marked with "ℳ" are in connection with the Meteorological Society.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending March 15, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, March 9.

Weather fine in parts of Scotland as well as over the S.E. of England, the eastern shores of the North Sea, and France, dull elsewhere, with some mist in the S. Weather very fine all day in the S.E., cloudy elsewhere.

Temperature fallen several degrees in the W. and N.W., changed little in most other places. Readings ranging from 48° at Scilly to 36° at Shields. Thermometer rising quickly in S.E. later, and reaching 60° in London and 59° at Cambridge.

Wind easterly over the greater part of France, England, and Ireland, southerly in Scotland and S. Norway, and south-westerly in the Shetlands and W. of Norway. Light in force generally, but blowing a gale in the W. of Norway. No change during day, wind very light.

Sea rough off the N. of Scotland, and high at Christiansund.

Barometer falling rapidly in Scandinavia, and briskly over these Islands and France. Readings highest Denmark, lowest Lapland, and comparatively low over Bay of Biscay. Pressure giving way uniformly and slowly all day.

Wednesday, March 10.

Weather fine over France, N. Germany, and many of our south-eastern stations, more or less cloudy elsewhere, with mist in several places, and rain in the N. of England. Rain all day in the N.E., but very fine weather in the S.

Temperature risen very generally; readings ranging from 48° at Scilly, to 40° at Aberdeen. Temperature rather low during day in the E. and N., but maximum in London 58° and at Yarmouth 57°.

Wind light or moderate from S. to E. over France and the Netherlands, fresh to strong from W. over Scandinavia, with light variable airs over these Islands. Very light breezes on our coasts all day.

Sea rough off Scilly and the Scaw.

Barometer falling briskly over the countries to the eastward of the North Sea, and slightly over these Islands, but rising in France. Sharp recovery taking place in the N. later, and area of high pressure forming near the Shetlands.

Thursday, March 11.

Weather fine over France, Denmark, Scandinavia, and parts of Scotland, cloudy or dull elsewhere, with rain in S. Ireland. Weather very fine in S. and S.E. all day, but a good deal of rain falling in the W. and N.

Temperature fallen quickly in Sweden and briskly over the S.E. of England, risen or remained steady elsewhere. Readings ranging from 50° at Scilly to 36° at Oxford. Rising considerably during day, and reaching 55° in London.

Wind light from N.E. in the E. of England, fresh from S.E. to S. on our western and northern coasts and over the W. of France. Moderate to fresh south-easterly and southerly winds all day in the W. and N.

Sea rough in the extreme N.

Barometer rising rapidly over Scandinavia and briskly over the greater part of these Islands and France, but falling in S. Ireland. Readings highest Norway, lowest Ireland. Pressure increasing a little later but slight fall occurring in N.W. in evening.

Friday, March 12.

Weather fine on the continent generally, dull over nearly the whole of these Islands, with rain at Scilly and on our N.W. coasts and mist in several places. Weather clearing in S.E. later, but rather heavy rain in N.W. and N.

Temperature changes slight and irregular over these Islands, rather brisk fall on continent. Readings ranging from 55° in S. France and 50° at Scilly, to 39° at Nottingham. Temperature a little above the average during day.

Wind easterly in the S. and over France, southerly in the N. Very light in force in the W., moderate to fresh in the E. and S. and strong in the N. Southerly wind appearing in the S.W. later, little other change.

Sea rough in the N.E.

Barometer risen very fast in Sweden and slightly at our western stations and over France, fallen a little elsewhere. Pressure highest (30·9 ins.) in Sweden, lowest Ireland. Barometer falling slowly everywhere during day.

(*Continued over.*)

(*Continued.*)

Synoptic Weather Charts.—8 a.m.		**Weather** during the 24 hours succeeding the date of the Charts
Barometer and Wind.	Cloud, Rain, Sea, and Temperature.	
		Saturday, March 13. *Weather* fine in Denmark and S. of Scandinavia, as well as in N. Ireland, cloudy or dull in most other places, with fog and mist in the E. of England. Sky clearing later and very fine weather experienced except in Ireland. *Temperature* risen fast in the N. of Norway and Sweden, fallen or changed irregularly elsewhere. Readings ranging over these Islands from 50° at Valentia to 34° at Nottingham. Rising quickly during day and reaching 60° at Cambridge. *Wind* southerly on our W. and N. coasts, very light and variable in the E. and S.E. Southerly gales on the eastern shores of the North Sea. Southerly wind in the S.W., increasing somewhat later; little other change. *Sea* rough in the far N. *Barometer* falling slowly in nearly all places. Still highest over the Baltic but lowest over N. Scotland. Readings very uniform over these Islands. Pressure decreasing in the S. and W. during day, increasing in the N.E.
		Sunday, March 14. *Weather* fine in parts of France and N. Germany, dull or cloudy and misty generally, with rain at Roche's Point and snow at the Scaw. Weather clearing a little over England later but remaining dull generally. *Temperature* changes irregular and in most places slight; readings ranging from 49° at Valentia to 32° at Cambridge. Temperature rather low all day in the E. and S.E. *Wind* north-easterly over Scandinavia and N. Germany, easterly over France, and southerly on our western coasts, light and variable in our eastern districts. No change during day. *Sea* rough near the Shetlands. *Barometer* rising in N. Scotland and N.W. of Norway, falling in most other places—quickly over Sweden. Pressure higher over the S. of France and over our E. coasts than elsewhere. but readings uniform generally. Falling in the W. and S. all day.
		Monday, March 15. *Weather* fine in parts of Scotland and France, and over the countries to the eastward of the North Sea, dull or cloudy and misty elsewhere. Dull during most of the day, but sky clearing considerably in the N. of Scotland and S.E. of England later. *Temperature* changed very little; readings moderately uniform, ranging from 50° at Valentia to 36° at Nairn. Temperature low all day—particularly in the E. *Wind* easterly over nearly the whole of these Islands and France, but southerly in the extreme N. of Scotland. Light or moderate in force except at Scilly. Wind easterly to south-easterly, except in the N.E. of Scotland, all day. *Sea* rough near the Scilly Islands. *Barometer* falling a little on our western coasts and over France, rising elsewhere. Pressure highest over Norway and lowest off our S.W. coasts and over the Bay of Biscay. No change of importance during day.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

(Signed) ROBERT H. SCOTT,
Secretary.

Meteorological Office,
116, Victoria Street, S.W.

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WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL;
AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 12.] WEEK ENDING MONDAY, MARCH 22, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE AND RAINFALL IN THE UNITED KINGDOM FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the Stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations 1857-69, as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for Week.
Principal Wheat-producing Districts.	1. SCOTLAND, EAST	58	27	39	1 below.	0	—	3 less.
	2. ENGLAND, NORTH-EAST	56	23	39	3 below.	0	—	4 less.
	3. ENGLAND, EAST	58	25	40	3 below.	1	less than ⅓	4 less.
	4. MIDLAND COUNTIES	58	23	41	2 below.	0	—	4 less.
	5. ENGLAND, SOUTH	59	27	43	0 (average).	0	—	4 less.
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	60	28	42	1 above.	1	less than ⅓	5 less.
	7. ENGLAND, NORTH-WEST	57	27	42	1 below.	1	less than ⅓	4 less.
	8. ENGLAND, SOUTH-WEST	62	34	46	1 above.	2	2	4 less.
	9. IRELAND, NORTH	61	29	44	2 above.	2	2	4 less.
	10. IRELAND, SOUTH	60	28	47	3 above.	2	5	1 less.

General Remarks.

Weather (excepting at some of our western and south-western stations at the commencement of the period) has been exceedingly dry, fine, and bright over the whole kingdom. On the 22nd, however, the sky had become overcast in many parts of England, and at some stations continued rather cloudy all day.

Temperature slightly above the mean over Ireland and all the western parts of Great Britain, about equal to the mean value in "England, S.," and a few degrees below it in all other districts. The nights have been very sharp at times and ground frosts frequent. The highest of the maxima occurred at most stations on the 18th or 19th, while the lowest of the minima (23° at Kelstern, Durham, and Shrewsbury) were registered on the 20th.

Wind anticyclonic; being generally light or moderate from E. in the S., fresh from between E. and S.E. in the W., and very light from the southward in the N.

Rainfall nearly equal to the mean in "Ireland, S.," but in most other districts no measureable amount has fallen.

The data from which the summary on the preceding page has been calculated are as follow :

Districts.	Names of Stations.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean
		°	°	°	°		Inches.	Inches.
1. SCOTLAND, E.	Nairn	51	29	39·2	− 0·4	0	—	−0·30
	Aberdeen	58	28	40·6	+ 0·1	0	—	−0·42
	Glenalmond	53	27	38·7	− 1·6	0	—	?
	Leith	50	27	37·8	− 2·8	0	—	−0·26
2. ENGLAND, N.E.	Shields	46	28	38·3	− 2·7	0	—	−0·34
	Durham	54	23	37·8	− 3·3	0	—	−0·42
	York	56	27	40·0	− 1·2	0	—	−0·36
	Spurn Head	46	31	39·5	− 2·0	0	—	?
	Kelstern (Lincolnshire) ⊕	49	23	37·6	− 4·1	0	—	−0·35
3. ENGLAND, E.	Yarmouth	44	30	38·4	− 3·8	0	—	−0·40
	Cambridge	58	25	40·4	− 1·8	0	—	−0·30
	Rothamsted	54	27	39·8	− 2·8	2	0·02	−0·38
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	56	26	40·0	− 1·9	1	0·01	−0·32
	Nottingham	56	27	40·7	− 1·5	0	—	−0·43
	Loughborough	58	26	42·1	+ 0·1	0	—	−0·40
	Leicester	56	25	40·9	− 1·2	0	—	−0·36
	Birmingham (Oscott)	56	27	40·3	− 2·4	0	—	−0·51
	Shrewsbury ⊕	55	23	40·0	− 2·6	0	—	−0·29
	Hereford ⊕	55	26	41·3	− 1·8	0	—	−0·36
	Cirencester	56	30	42·2	− 0·8	0	—	−0·44
	Oxford	55	27	41·9	− 1·0	0	—	−0·39
5. ENGLAND, S.	London	57	33	43·3	+ 0·2	0	—	−0·33
	Marlborough ⊕	55	27	42·2	− 1·1	0	—	−0·45
	Strathfield Turgiss ⊕	59	30	43·2	− 0·2	0	—	−0·35
	Dover	48	38	42·5	− 0·6	0	—	−0·46
	Hastings (St. Leonard's)	56	36	44·2	+ 0·2	0	—	−0·44
	Hurst Castle	52	34	43·9	0·0	0	—	?
6. SCOTLAND, W.	Laudale (Loch Sunart)	60	34	44·2	+ 3·2	0	—	?
	Glasgow	55	32	40·8	+ 0·2	4	0·04	−0·46
	Ardrossan	58	32	42·5	+ 1·2	0	—	−0·51
	Silloth (Cumberland)	60	28	42·6	+ 1·0	0	—	−0·40
	Douglas (Isle of Man)	52	32	41·2	− 1·6	0	—	−0·60
7. ENGLAND, N.W.	Stonyhurst	52	28	40·3	− 1·7	1	0·01	−0·69
	Blackpool ⊕	55	27	41·3	− 1·4	0	—	−0·45
	Manchester	55	30	41·7	− 0·3	0	—	−0·48
	Liverpool Observatory (Bidston)	56	31	42·5	− 0·3	0	—	−0·33
	Holyhead	57	37	44·9	+ 1·4	2	0·19	−0·27
8. ENGLAND, S.W.	Pembroke	53	35	43·6	− 1·4	2	0·17	−0·43
	Barnstaple	62	34	48·8	+ 4·5	1	0·06	−0·50
	Falmouth	50	41	46·3	+ 0·3	2	0·23	−0·38
	Plymouth	55	38	46·1	+ 1·1	1	0·24	−0·37
	Prawle Point	50	38	44·5	− 0·4	2	0·36	?
9. IRELAND, N.	Londonderry	61	31	44·3	+ 2·6	2	0·15	−0·41
	Mullaghmore	57	39	46·7	+ 4·1	2	0 08	?
	Markree Castle	59	33	45·4	+ 2·5	2	0·11	−0·54
	Brookeborough	57	30	43·8	+ 1·2	2	0·42	?
	Armagh	54	31	42·9	+ 0·1	1	0·16	−0·24
	Donaghadee	50	29	42·2	0·0	2	0·04	?
10. IRELAND, S.	Dublin	53	35	44·5	+ 1·4	2	0·31	−0·12
	Parsonstown	60	28	46·0	+ 3·0	2	0·43	−0·12
	Roche's Point	52	42	47·3	+ 2·3	2	1·17	+0·38
	Valentia	60	41	49·9	+ 4·9	2	0·55	−0·37
	Foynes	59	30	45·3	+ 1·4	2	0·16	?
SCOTLAND, N.	Sumburgh Head	52	36	41·8	+ 3·1	0	—	−0·34
	Stornoway	50	32	41·5	+ 1·7	0	—	−0·93
	Wick	52	28	39·7	+ 0·2	0	—	−0·33
——	Scilly (St. Mary's)	52	43	48·2	+ 0·5	3	0·54	+0·06
	Jersey (Noirmont)	58	39	46·5	+ 1·5	2	0·46	−0·30

The observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.
The stations marked with "⊕" are in connection with the Meteorological Society.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE during the Week ending March 22, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, March 16.

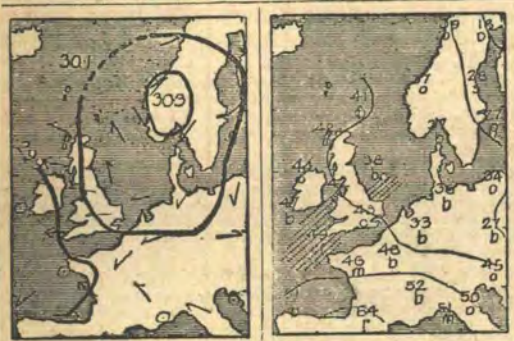
Weather fine on the eastern shores of the North Sea and locally at a few of our stations, but cloudy or dull generally, with rain on our S.W. coasts, and mist over France. Weather improving in the S.E. later, but rain continuing in the S.W.

Temperature risen a little in France but fallen in most places. Readings ranging from 49° at Valentia to 38° at Aberdeen. Very little change during day, and maxima below 45° except in W. and S.

Wind easterly over N. Germany, the Channel, and S. of England, and south-easterly on our western coasts, blowing strongly in the S.W., light elsewhere. Increasing in force in the W. later; little other change.

Sea rough in the S.W.

Barometer falling everywhere. Large anticyclone over Norway and the North Sea, with low pressures in the S.W. Decrease continuing all day—most on our S.W. coasts.



Wednesday, March 17.

Weather wet at Scilly, Prawle Point, and Jersey, and dull at many of our south-western and north-western stations, but sky clear, or nearly so, elsewhere. Very fine weather all day in E., but more cloudy in W.

Temperature changes slight generally and very irregular. Thermometer still low in E.; readings ranging from 49° at Scilly to 36° at York and 29° at Nairn. Maxima about 5° higher generally than on previous day.

Wind northerly on eastern shores of North Sea, easterly over England, south-easterly over Ireland, and southerly in Scotland; fresh in force in the W. and S.W., light or moderate elsewhere. No change later.

Sea rough in S.W.

Barometer falling a little in W. of France and N. of Scotland, rising slowly elsewhere. Large anticyclone still shown over Norway and North Sea and low pressures off our S.W. coasts. Pressure increasing slowly all day.

Thursday, March 18.

Weather dull at some south-western stations and in the N.W. of France, very fine elsewhere. Very fine all day, the only rain falling being 0·01 in. at Scilly.

Temperature fallen over England and France, risen a little elsewhere; readings ranging from 50° at Valentia, to 33° at Shields, and 32° at Nairn. Thermometer rising fast later, but shade temperatures low all day.

Wind almost unchanged; northerly to the eastward of the North Sea, south-easterly on our western coasts, and southerly in Scotland. Blowing strongly in the S.W., and reaching a gale at Scilly.

Sea rough in south-west.

Barometer rising in all places. Anticyclone still lying over the North Sea, and comparatively low pressures off our S.W. coasts. Pressure increasing slowly all day, and general distribution exchanged.

Friday, March 19.

Weather dull at our central and south-eastern stations and foggy in the N.E., very fine and bright elsewhere. Exceedingly fine all day and scarcely any rain falling.

Temperature risen a little on the eastern shores of the North Sea, fallen somewhat elsewhere. Ranging from 49° in the S.W. to 31° at Shields. Temperature low all day in E. but particularly at Yarmouth.

Wind easterly over France and the Channel, south-easterly on our western coasts, westerly in Norway, and northerly over Denmark. Strong to a gale in the W. and S.W., light or moderate elsewhere. Not much change later, but gale at Scilly subsiding.

Sea rough in the S.W.

Barometer rising slightly except in Scandinavia. Anticyclone lying over Great Britain and North Sea, and low pressures over Spain and Sweden. Pressure decreasing everywhere later, most within the anticyclone.

(*Continued over.*)

(Continued.)

Synoptic Weather Charts.—8 a.m.		**Weather** during the 24 hours succeeding the date of the Charts
Barometer and Wind.	Cloud, Rain, Sea, and Temperature.	
		Saturday, March 20. *Weather* foggy and dull over central and eastern England and the Netherlands, very fine elsewhere. Fog clearing later, and weather exceedingly fine and dry all day over the whole of western Europe. *Temperature* fallen several degrees over Scandinavia and eastern England. Readings very low over these Islands, ranging from 50° at Valentia to 27° over central England. Temperature low all day. *Wind* northerly over the North Sea and the E. of England, easterly over France and our Channel stations, and easterly to south-easterly in the W. Blowing freshly in the S., light or moderate elsewhere. Little change later. *Sea* rough in the S.W. *Barometer* risen over Scandinavia, changed irregularly elsewhere, but inclined to fall in most places. Readings high and very uniform over the E. of Great Britain, the North Sea, and Norway. Pressure increasing a little except in S.W. during day.
		Sunday, March 21. *Weather* cloudy or dull at some eastern and north-eastern stations and on our S.W. coast, still very fine elsewhere, and exceedingly fine dry weather again prevailing in all places during the day. *Temperature* risen quickly at our eastern stations and over Sweden, fallen elsewhere. Readings still low, ranging from 47° in the S.W., to 38° in the S.E. and 37° in the N. Temperature again low all day. *Wind* northerly over the North Sea, easterly on our S. coasts and over France, south-easterly in the W., and southerly in the N. Blowing strongly in the S.W. and W., light elsewhere. No change of importance in the evening. *Sea* rough in the S.W. *Barometer* falling a little over France and Scandinavia, rising elsewhere. Anticyclone still shown over the North Sea and greater part of England and Scotland, with low pressures over southern France and the Baltic. Slight general fall during day; no other change.
		Monday, March 22. *Weather* dull in our central and north-eastern districts, exceedingly fine in nearly all other parts of western Europe. Sky nearly clear all day except over central England, and no rain falling at any station. *Temperature* inclined downward generally, but changes slight and rather irregular. Readings ranging from 46° at Scilly to 36° at Oxford and 34° at Ardrossan. Temperature low all day, particularly in the E. *Wind* light and variable on our northern coasts, easterly in almost all other places—blowing very lightly on our S.E. coasts and over N. Germany, but freshly in the S.W. and over the Bay of Biscay. Southerly wind springing up in the N. later. *Sea* rough in the S.W. *Barometer* changes very slight, but mercury rising at nearly all stations. Anticyclone embracing Scandinavia, the North Sea, and these Islands, with low pressures over southern France. Slight decrease except in Denmark later.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

(Signed) ROBERT H. SCOTT,
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Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the Stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations 1857-69, as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for Week.
Principal Wheat-producing Districts.	1. SCOTLAND, EAST	61	26	40	2 below.	1	less than ½	3 less.
	2. ENGLAND, NORTH-EAST	57	28	40	2 below.	1	less than ½	4 less.
	3. ENGLAND, EAST	65	21	41	2 below.	1	less than ½	4 less.
	4. MIDLAND COUNTIES	63	25	43	1 below.	0	—	4 less.
	5. ENGLAND, SOUTH	65	22	44	1 below.	0	—	4 less.
Principal Grazing, &c. Districts.	6. SCOTLAND, WEST	55	27	42	0 (average).	1	less than ½	5 less.
	7. ENGLAND, NORTH-WEST	59	26	42	2 below.	1	1	4 less.
	8. ENGLAND, SOUTH-WEST	61	29	45	1 below.	2	4	2 less.
	9. IRELAND, NORTH	59	27	44	0 (average).	2	1	4 less.
	10. IRELAND, SOUTH	60	30	46	1 above.	1	1	5 less.

General Remarks.

Weather, though cloudy, hazy, or foggy at times, has been generally fine, bright, and very dry, over the whole country.

Temperature equal to the mean in "Scotland, W." and "Ireland, N.," and slightly above it in "Ireland, S.," but in all other districts it has been a little below the mean value. The highest of the maxima (63° to 65°) were registered at most stations on the 25th or 26th, while the thermometer very frequently fell during the night time below 30°, and at Rothamsted on the early morning of the 29th reached the very low reading of 21°.

Wind until the 28th was generally moderate from E. in the S., fresh from S.E. in the W., and light from the southward in Scotland. Towards the close of the period, however, very variable airs were prevalent all over the United Kingdom.

Rainfall scarcely measureable in any district.

The data from which the summary on the preceding page has been calculated are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.		
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean
		°	°	°	°		Inches.	Inches.
1. SCOTLAND, E.	Nairn	55	26	37·9	− 3·1	1	0·01	−0·29
	Aberdeen	56	33	41·3	0·0	1	0·01	−0·42
	Glenalmond	57	27	39·6	− 1·7	0	—	?
	Leith	61	27	40·5	− 1·1	1	0·01	−0·24
2. ENGLAND, N.E.	Shields	51	33	40·2	− 1·8	1	0·02	−0·33
	Durham							
	York	57	28	41·1	− 1·5	0	—	−0·36
	Spurn Head	53	36	41·0	− 2·0	0	—	?
	Kelstern (Lincolnshire) ℳ	50	31	39·2	− 3·6	0	—	−0·35
3. ENGLAND, E.	Yarmouth	48	29	40·0	− 3·3	1	0·08	−0·32
	Cambridge	65	23	42·4	− 1·2	0	—	−0·40
	Rothamsted	60	21	41·1	− 2·6	—	0·02*	−0·38
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	59	25	41·3	− 2·0	0	—	−0·34
	Nottingham	63	28	43·2	− 0·1	0	—	−0·43
	Loughborough	62	29	44·1	+ 0·9	0	—	−0·40
	Leicester	61	29	43·3	− 0·1	0	—	−0·35
	Birmingham (Oscott)	62	29	43·1	+ 0·1	0	—	−0·50
	Shrewsbury ℳ	63	25	40·9	− 3·0	0	—	−0·28
	Hereford ℳ	63	27	43·7	− 0·9	0	—	−0·35
	Cirencester	62	26	43·8	− 0·7	0	—	−0·45
	Oxford	62	27	42·8	− 1·2	0	—	−0·36
5. ENGLAND, S.	London	63	28	44·0	− 0·5	0	—	−0·35
	Marlborough ℳ	62	25	43·6	− 1·1	0	—	−0·45
	Strathfield Turgiss ℳ	65	22	42·6	− 2·3	0	—	−0·35
	Dover	54	35	43·7	− 0·5	0	—	−0·46
	Hastings (St. Leonard's)	62	31	45·3	+ 0·1	0	—	−0·44
	Hurst Castle	54	31	43·0	− 2·1	1	0·05	?
6. SCOTLAND, W.	Laudale (Loch Sunart)	55	32	43·2	+ 1·2	2	0·14	?
	Glasgow	54	31	40·6	− 1·5	1	0·01	−0·49
	Ardrossan	52	29	45·4	+ 3·1	0	—	−0·50
	Silloth (Cumberland)	55	27	40·1	− 2·9	1	0·03	−0·36
	Douglas (Isle of Man)	54	35	42·9	− 0·8	0	—	−0·56
7. ENGLAND, N.W.	Stonyhurst	53	31	41·0	− 2·2	0	—	−0·66
	Blackpool ℳ	56	26	40·3	− 3·7	0	—	−0·41
	Manchester	56	29	41·3	− 1·8	0	—	−0·49
	Liverpool Observatory (Bidston)	59	31	43·2	− 0·7	0	—	−0·30
	Holyhead	59	34	45·1	+ 0·9	1	0·29	−0·17
8. ENGLAND, S.W.	Pembroke	52	33	43·2	− 2·9	2	0·18	−0·40
	Barnstaple	61	30	47·0	+ 1·4	2	0·24	−0·29
	Falmouth	51	37	46·0	− 1·1	3	0·86	+0·26
	Plymouth	57	29	46·4	+ 0·4	2	0·43	−0·17
	Prawle Point	52	32	44·2	− 1·8	3	0·16	?
9. IRELAND, N.	Londonderry	59	29	45·5	+ 1·9	2	0·07	−0·49
	Mullaghmore	54	36	44·5	+ 0·6	2	0·17	?
	Markree Castle	56	31	44·1	+ 0·1	2	0·10	−0·35
	Brookeborough	55	30	43·0	− 0·9	1	0·03	?
	Armagh	55	27	43·0	− 1·0	1	0·01	−0·39
	Donaghadee	52	30	41·4	− 2·1	2	0·02	?
10. IRELAND, S.	Dublin	54	31	44·5	+ 0·4	2	0·14	−0·35
	Parsonstown	60	30	44·4	+ 0·4	1	0·11	−0·43
	Roche's Point	56	38	47·5	+ 1·5	1	0·28	−0·45
	Valentia	58	37	48·3	+ 2·4	1	0·05	−0·86
	Foynes	59	30	44·1	− 0·9	2	0·13	?
SCOTLAND, N.	Sumburgh Head	49	35	40·4	+ 0·8	1	0·06	−0·30
	Stornoway	49	30	40·7	+ 0·2	0	—	−0·88
	Wick	53	30	41·0	+ 0·5	1	0·03	−0·31
——	Scilly (St. Mary's)	52	41	46·7	− 1·8	4	0·29	−0·17
	Jersey (Noirmont)	56	38	48·1	− 2·1	2	0·15	−0·56

The observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.
The stations marked with "ℳ" are in connection with the Meteorological Society.

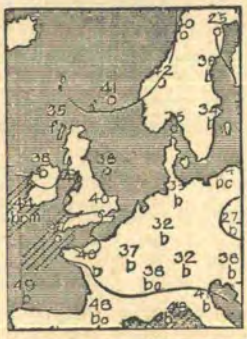
* Dew.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending March 29, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.



Tuesday, March 23.

Weather dull over the greater part of England and Ireland, and foggy in Scotland, but fine on our S. coast and at most of the continental stations. Sky clearing later, and weather fine and dry generally during day.

Temperature fallen somewhat in W. and N., changed little elsewhere. Low everywhere, ranging from 47° at Scilly to 33° at Nairn. Temperature low all day. Maxima not exceeding 50°.

Wind easterly in nearly all parts of these Islands and France, westerly over Scandinavia. Blowing strongly over Bay of Biscay and our S.W. coasts. Wind drawing into S. in the W. and N. later.

Sea rough S.W.

Barometer falling a little at our south-western stations, and briskly in N. Norway. Large anticyclone over these Islands and North Sea, with low pressures over France and Lapland. Pressure decreasing slowly during day.

Wednesday, March 24.

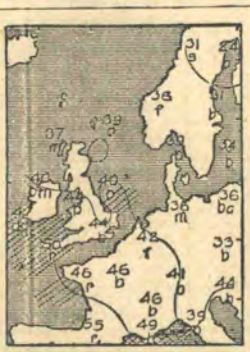
Weather very fine generally, but cloudy at some western and north-eastern stations, and in Norway. Fine and dry all day.

Temperature fallen somewhat over Ireland and England, risen in most other places. Low over these Islands, ranging from 45° at Scilly to 30° at Nairn, but maxima higher than on 23rd. Frost in inland parts at night.

Wind easterly over France and on most of our coasts, but southerly in N. Scotland, and westerly in Norway and Sweden. Blowing freshly or strongly in S. and W. No change later.

Sea rough S.W.

Barometer falling over the S. of these Islands, the N. of France, and N. Germany, rising elsewhere. Anticyclone still shown over the North Sea, with low pressures over the Bay of Biscay and Lapland. Pressure decreasing decidedly in the S.W. later.



Thursday, March 25.

Weather dull and rainy on our S.W. coasts and in the W. of France, fine and bright in nearly all other places. No change during day, sky remaining clear except in the S.W.

Temperature fallen on our northern coasts and over Scandinavia, risen elsewhere, ranging from 50° at Scilly to 36° at Cambridge and 30° at Nairn. Maxima exceeding 60° in S.E. but frost again at night.

Wind southerly over France, south-easterly and easterly over these Islands, blowing strongly in the W. and over Bay of Biscay, light elsewhere. Wind falling lighter during day and veering a little in W. Ireland.

Sea rough in the S.W.

Barometer rising quickly in Sweden, falling elsewhere, briskly in W. and S.W. Large anticyclone over Scandinavia and the North Sea, depression off our S.W. coasts. Pressure giving way slowly all day, disturbance moving northward.

Friday, March 26.

Weather still cloudy, wet, and unsettled on our own, and the French, western coasts, fine and bright elsewhere. Sky overcast, with mist or rain all day in W., nearly clear in S.E. and moderately so generally.

Temperature very little changed, ranging from 50° at Valentia to 35° at Cambridge and 32° at Nairn. Maxima again exceeding 60° in S.E., followed by cold night.

Wind easterly in nearly all parts of the country, but drawing into S. in E. Scotland. Light or moderate in force generally. Fresh westerly winds in Scandinavia. Little change during day.

Sea moderate to smooth.

Barometer falling fast in Norway and Sweden, rising slightly elsewhere. Anticyclone still shown over North Sea, with low pressures off our S.W. coasts. Barometer rising slowly all day.

(*Continued over.*)

(Continued.)

Synoptic Weather Charts.—8 a.m.

Barometer and Wind.	Cloud, Rain, Sea, and Temperature.	**Weather** during the 24 hours succeeding the date of the Charts

Saturday, March 27.

Weather fine at some western and northern stations, dull or cloudy generally. Clearing considerably in the S.E. later but still cloudy in most places. No rain occurring at any station.

Temperature risen over France, fallen elsewhere—quickly over Sweden. Readings low except in the S.W., ranging from 50° at Valentia to 31° at Nairn. Maxima below 50° except in the W. and S.W., slight frost at inland stations at night.

Wind light and variable Scotland, easterly in nearly all other places—blowing freshly over France and the Channel. Easterly breezes general all day.

Sea rough near Scilly.

Barometer rising slowly except in the S. of France. Pressure high and very uniform over the northern parts of the Kingdom, the North Sea, and Scandinavia, lowest over the Bay of Biscay. Slight decrease in the N. and W. later.

Sunday, March 28.

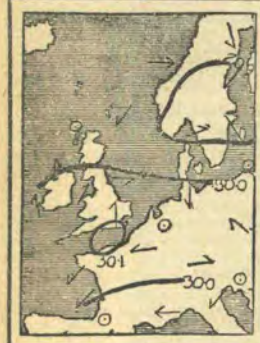
Weather fine at most of our western and northern stations and over France, overcast over our central and eastern districts. Clearing later, and very fine weather experienced except in parts of Scotland.

Temperature fallen, and low generally, ranging from 46° at Scilly to 33° at Nairn and Oxford. Thermometer rather low all day in the S. and E., and sharp frost experienced at night.

Wind north-easterly over the Netherlands and S.E. of England, easterly over France and the S. of England, and southerly on our western and northern coasts. Light or moderate in force. Light variable breezes prevailing in the evening.

Sea moderate to smooth.

Barometer falling over Scotland and Scandinavia, rising elsewhere. Slight anticyclone over England, the North Sea, and Denmark, with large depression over Lapland. Anticyclone lying over Ireland, England, and the N. of France in the evening.



Monday, March 29.

Weather dull and foggy over Ireland, generally fair and bright elsewhere. Very fine all day in the S.E. but cloudy in the W. and N. Scarcely any rain falling.

Temperature fallen at our south-eastern stations and over France, risen several degrees elsewhere. Very low in S.E., and readings ranging from 48° at Valentia to 32° in London. Maxima in the S.E. during day about 60°. Slight frost at night.

Wind light easterly over France, southerly on our western coasts, and very variable in most other places. Light variable breezes all day.

Sea nearly smooth all round our coasts.

Barometer falling slowly and uniformly over the whole of western Europe. Pressure exceedingly uniform over these Islands and their neighbourhood with large shallow depression over Scandinavia. Slight depression forming over south-eastern England later.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

(Signed) ROBERT H. SCOTT,
Secretary.

Meteorological Office,
116, Victoria Street, S.W.

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WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 14.] WEEK ENDING MONDAY, APRIL 5, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positons of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	DISTRICTS.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	57	33	45	2 above.	4	6	3 more.	29	32
	2. ENGLAND, N.E.	60	34	46	2 above.	6	14	11 more.	19	21
	3. ENGLAND, E.	63	31	47	2 above.	5	11	6 more.	27	30
	4. MID. COUNTIES	64	27	48	2 above.	6	12	8 more.	43	48
	5. ENGLAND, S.	65	32	47	1 above.	6	9	5 more.	30	33
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	56	34	46	2 above.	7	16	8 more.	32	35
	7. ENGLAND, N.W.	58	31	47	1 above.	6	11	7 more.	32	35
	8. ENGLAND, S.W.	66	32	48	1 above.	6	17	13 more.	34	38
	9. IRELAND, N.	58	30	46	1 above.	7	11	5 more.	40	45
	10. IRELAND, S.	59	34	48	2 above.	7	13	6 more.	39	43

General Remarks.

Weather during this period has been much less settled than of late, the sky being generally cloudy over the whole country with frequent heavy showers. Hail fell in some places occasionally, notably on the 5th, and was accompanied over central England by thunder and lightning.

Temperature one or two degrees above the mean in all districts. The highest of the maxima (66° at Barnstaple) occurred on March 31st, but at most other stations the highest readings were registered either on March 30th or April 3rd. The lowest of the minima were observed during the early morning of the 30th, and at Oxford the thermometer went as low as 27°.

Rainfall above the mean in all districts, the excess being very marked in "England, N.E.," and "England, S.W."

Bright sunshine was much more continuous in the western than in the eastern parts of the kingdom, but in no district was the sun clearly visible for as much as half of the time that he was above the horizon. The duration recorded varies from 43 hours in the "Midland Counties" and 40 in "Ireland, N.," to 19 in "England, N.E."

Wind generally south-westerly (southerly to westerly) in all parts of the kingdom; and, though moderate in the E. and S.E., blew freshly or strongly in the W. and N., and reached the force of a gale in Scotland both on March 31st and April 2nd.

NOTE.—It will be seen that two new columns have been added to this report, giving the prevalence of bright sunshine during the week at a considerable number of stations. The observations are recorded by self-recording instruments, and will for the future be given for each week. Four new stations also have been added to the list on p. 4; and the general arrangement of the report has been somewhat modified in order to make room for the increased information.

Q 876. 100.—4/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending April 5, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, March 30.

Weather fine over France but dull in nearly all other places, with a good deal of fog and mist. Fine and bright at most eastern and southern stations later. Rain falling in W.

Temperature risen several degrees south-eastern England and slightly over the Continent, fallen W. and N. Readings uniform between 42° and 47°. Maxima over central England about 60°.

Wind easterly over France and the Netherlands, southerly on our western and northern coasts and in Norway. Light or moderate generally, with calms over central England. Southerly wind in the W., increasing later.

Sea nearly smooth.

Barometer falling on our W. coasts, rising slightly elsewhere. Readings high and uniform over these Islands and the North Sea, low over the Gulf of Lyons and to the north-westward of Scotland. Pressure giving way briskly in the N.W. later.

Wednesday, March 31.

Weather still fine over France and clearing in W. Ireland, dull or cloudy elsewhere, with rain in the W. of Great Britain. Rain extending later and weather dull, unsettled, and rainy generally.

Temperature risen very generally, readings still uniform over us, ranging between 41° and 50°. Not much change later, and weather rather cold during day. Maxima not much above 50° except in S.E.

Wind westerly in S. Ireland, southerly elsewhere. Light or moderate in the S.E., but stronger generally, and reaching a gale in N. Scotland. Wind strong and squally all day, blowing a gale in N.

Sea rough in S.W., W., and N.

Barometer faling over the whole of western Europe—quickly in N.W. Pressure still highest over Sweden, with large depression off the Hebrides. Small disturbance passing across England later, and pressure recovering in W.

Thursday, April 1.

Weather generally fine and bright on our W. and S.W. coasts, dull and rainy in the E. and over the North Sea. Turning dull and showery in the S.W. later but becoming fine and bright in the E.

Temperature fallen in most places. Readings still uniform between 40° and 48°. Maxima during day between 45° and 55°.

Wind westerly to north-westerly on most of our own and the French coasts and south-easterly on the eastern shores of the North Sea. Fresh to strong in force generally and reaching a gale in W. Norway. Wind moderating later and backing to S.W. in the W.

Sea rough in the W. and S. and high in the N.

Barometer fallen over and to the eastward of the North Sea, risen over these Islands and France. Depression lying off our N.E. coasts with areas of high readings over the N. of Spain and N. of Scandinavia. Pressure increased everywhere later and disturbance became shallower.

Friday, April 2.

Weather dull over nearly the whole of western Europe, with rain at the great majority of stations. Dull and unsettled all day, but clearing somewhat in the S.E.

Temperature risen slightly in the W., changed little and irregularly elsewhere. Readings ranging from 40° in the N.E. of England to 53° in S. Ireland. Maxima between 45° and 55° generally.

Wind westerly on our western coasts, south-westerly and southerly over England and the S. of Scotland, and south-easterly in the N. of Scotland. Blowing freshly or strongly in the S.W. and W., and reaching a gale in the N. Little change later; gale still holding.

Sea rough all round our S.W. and W. coasts, and high in the N.

Barometer rising in Sweden and Denmark, falling elsewhere, briskly in N.W. Rather large depression lying off the W. coast of Scotland, with a smaller one over the Irish Sea. Both depressions moving eastward later, and barometer rising in W.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts

Saturday, April 3.

Weather fine in parts of central England and the E. and N. of Scotland, but dull or cloudy generally, with showers in Ireland and S.W. France. Cloudy all day, with occasional showers.

Temperature fallen somewhat in Ireland, risen several degrees elsewhere. Readings moderately uniform, ranging from 43° in the N. of Scotland to 53° in London. Maxima about 60° over central and south-eastern England.

Wind westerly over France, south-westerly over these Islands, and south-easterly over the North Sea; blowing moderately or freshly on our coasts, and reaching a gale in Norway. Scarcely any change during day.

Sea rough in S.W. and N.E., high in the Bay of Biscay.

Barometer rising most places, but falling in Ireland and to eastward of the North Sea. Readings high in Lapland, and comparatively high in Spain. Large disturbance off N.W. of Scotland, and small subsidiary one near N. Germany. Pressure decreasing slowly during day.

Sunday, April 4.

Weather fine over Ireland, Scotland, and the N. of Scandinavia, dull and rainy elsewhere with snow at Oxö. Frequent showers generally all day, but weather clearing in evening.

Temperature fallen over the British Isles, risen a little over France and N. Germany. Readings ranging from 40° in the Hebrides to 53° in London. Little change later and maxima between 50° and 55° generally.

Wind westerly over France and the greater part of Ireland and England, southerly in the N., and easterly over Norway and Sweden. Strong and squally except over Scotland and the S.E. of England and reaching a gale in some places. Wind veering to N.W. in the S. later.

Sea still rough in S.W. and N.E.

Barometer falling everywhere but distribution little changed. Pressure high Lapland and Spain, low to north-westward of Scotland with small depressions passing over us. Barometer rising in W. later, still falling in N.

Monday, April 5.

Weather improved considerably and fine and bright in most places though local showers still falling. Showery all day but with bright intervals.

Temperature fallen over France and the S.E. of England, changed little and irregularly elsewhere; again very uniform, ranging from 44° in the N. to 50° in London. Temperature rather low all day.

Wind south-westerly over France, England, and Ireland, southerly in Scotland, south-easterly in Norway. Moderate to strong in force, and strong and squally from the same quarters during day.

Sea rough in S.W., W., and N.

Barometer falling on our western and northern coasts and in Norway, rising elsewhere. Pressure still high in Sweden and Spain, low off the N.W. of Scotland. Barometer falling all day in most parts of the country but slight recovery in Hebrides, and depression apparently passing north-eastward.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	48	36	42·3	+1·4	6	1·31	+0·92	*	*
	Stornoway	50	35	44·1	+2·4	7	0·82	+0·12	33	36
	Wick	53	32	43·7	+1·8	4	0·38	0·00	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	55	40	48·7	−0·8	7	1·79	+1·32	*	*
	Jersey (Noirmont)	57	39	48·5	+1·5	6	1·21	+0·56	32	36

The above observations, made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	55	35	45·0	+2·5	4	0·19	−0·11	*	*
	Aberdeen	55	37	44·2	+1·6	4	1·35	+0·90	29	32
	Glenalmond	52	33	42·2	−0·4	5	0·42	?	*	*
	Leith	57	34	46·7	+3·7	4	0·35	+0·07	*	*
2. ENGLAND, N.E.	Shields	55	37	45·5	+2·0	6	0·96	+0·60	*	*
	Durham	58	34	45·3	+1·7	5	0·85	+0·44	?	?
	York	60	36	46·7	+2·7	6	2·00	+1·64	?	?
	Spurn Head	56	38	45·6	+1·1	6	1·31	?	*	*
	Kelstern (Lincolnsh.) ⁂	57	34	44·9	+1·0	6	1·92	+1·56	19	21
3. ENGLAND, E.	Hillington ⁂	59	34	47·0	+1·7	6	1·79	?	20	22
	Yarmouth	57	34	45·7	+0·7	6	1·02	+0·82	*	*
	Cambridge	63	31	48·2	+2·9	3	0·58	+0·28	33	37
	Rothamsted	59	32	47·0	+1·6	6	1·18	+0·79	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	61	37	47·0	+2·2	5	1·31	+0·95	*	*
	Nottingham	63	35	48·3	+3·3	6	1·48	+1·04	*	*
	Loughborough	61	38	48·4	+3·4	6	1·57	+1·17	*	*
	Leicester	59	37	47·9	+2·8	6	1·33	+0·92	?	?
	Birmingham (Oscott)	59	35	47·2	+1·2	6	1·10	+0·72	*	*
	Shrewsbury ⁂	60	34	47·3	+2·1	7	0·58	+0·28	*	*
	Churchstoke ⁂								43	48
	Hereford ⁂	64	32	48·0	+1·6	7	0·93	+0·58	*	*
	Cirencester	63	36	47·0	+0·8	6	1·18	+0·73	?	?
	Oxford	62	27	48·0	+2·3	6	0·83	+0·48	?	?
5. ENGLAND, S.	London	62	32	48·2	+1·9	5	0·97	+0·62	30	33
	Marlborough ⁂	64	33	47·4	+1·2	6	1·20	+0·75	*	*
	Strathfield Turgiss ⁂	65	32	47·8	+1·4	5	0·76	+0·38	*	*
	Dover	53	36	46·2	+0·4	6	0·82	+0·37	*	*
	Hastings (St. Leonard's)	53	40	46·2	−0·3	5	0·86	+0·42	*	*
	Southampton									
	Hurst Castle	53	34	46·9	+0·7	6	1·04	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	54	34	44·8	+1·6	7	3·18	?	*	*
	Glasgow	56	37	45·9	+2·4	7	0·90	+0·40	27	30
	Ardrossan	52	38	45·9	+2·1	7	1·42	+0·92	*	*
	Silloth (Cumberland)	55	34	45·2	+1·0	6	1·12	+0·65	?	?
	Douglas (Isle of Man)	55	35	45·6	+0·6	6	1·57	+1·14	36	40
7. ENGLAND, N.W.	Stonyhurst	56	34	45·2	+0·6	7	1·40	+0·82	29	32
	Blackpool ⁂	55	39	45·9	+0·5	5	1·07	+0·68	*	*
	Manchester	58	31	45·5	+0·5	7	1·60	+1·12	*	*
	Liverpool Obsr (Bidston)	58	40	47·7	+2·4	5	0·78	+0·48	*	*
	Llandudno ⁂	58	37	47·9	+1·4	5	0·88	?	34	38
	Holyhead	53	40	47·2	+1·6	7	0·76	+0·33	*	*
8. ENGLAND, S.W.	Pembroke	52	38	45·6	−1·8	7	1·40	+0·86	34	38
	Barnstaple	66	33	51·1	+4·1	6	2·30	+1·77	*	*
	Falmouth	58	37	48·5	+0·2	7	1·87	+1·30	?	?
	Plymouth	59	32	49·0	+1·6	6	1·83	+1·27	*	*
	Prawle Point	55	37	47·2	+0·2	5	0·97	?	*	*
9. IRELAND, N.	Londonderry	56	31	44·8	−0·2	7	1·47	+0·91	*	*
	Mullaghmore	54	40	47·0	+2·0	7	1·12	?	*	*
	Markree Castle	56	30	45·4	+0·1	7	0·80	+0·35	37	41
	Brookeborough	58	31	45·8	+0·5	6	1·60	?	*	*
	Armagh	55	36	46·2	+1·1	6	0·71	+0·30	43	48
	Donaghadee	57	36	46·4	+1·4	6	0·75	?	*	*
10. IRELAND, S.	Dublin	59	35	48·6	+3·0	7	0·45	−0·09	49	54
	Parsonstown	58	34	46·3	+1·0	7	1·13	+0·63	39	43
	Roche's Point	59	40	49·0	+2·0	7	1·55	+0·85	*	*
	Valentia	57	41	49·0	+2·2	7	1·69	+0·79	30	33
	Foynes	56	40	48·4	+1·9	7	1·53	?	*	*

Stations marked ⁂ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL;
AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 15.] WEEK ENDING MONDAY, APRIL 12, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positons of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857–69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866–75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	55	31	44	0 (average).	4	3	1 less.	24	25
	2. ENGLAND, N.E.	58	32	43	2 below.	4	4	1 less.	23	25
	3. ENGLAND, E.	60	31	43	4 below.	5	3	1 less.	25	27
	4. MID. COUNTIES	59	31	43	4 below.	3	2	2 less.	17	18
	5. ENGLAND, S.	60	33	45	3 below.	4	3	2 less.	17	18
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	59	32	46	0 (average).	4	4	1 less.	37	39
	7. ENGLAND, N.W.	54	30	44	3 below.	2	2	3 less.	27	29
	8. ENGLAND, S.W.	57	37	46	3 below.	3	2	3 less.	38	41
	9. IRELAND, N.	55	29	44	2 below.	4	5	1 less.	43	46
	10. IRELAND, S.	56	31	46	2 below.	4	4	2 less.	44	48

General Remarks.

Weather during this period has been generally cloudy with frequent, though slight, showers. Thunderstorms were experienced over central and eastern England on the 6th and 7th, and both there and in many other parts of the country showers of hail occurred on those dates.

Temperature about equal to the mean in Scotland, but below it in all other places, the deficit being as much as 4° in the "Midland Counties" and "England, E." The highest of the maxima (60° in London and at Cambridge) occurred on the 7th, and very slight frosts have been registered in most districts during the week.

Rainfall a little less than the mean in all districts.

Bright sunshine was experienced much more constantly over Ireland and "England, S.W.," than in other parts of the kingdom. Over nearly the whole of Great Britain the sun could only be seen clearly for about a quarter of the time during which it was above the horizon, and in Ireland the greatest duration recorded for the whole week was only 44 hours.

Wind at the commencement of the period was south-westerly over the whole country, but on the 7th it had shifted to N. in the W. and to W. in the S., and during the remainder of the period northerly, north-easterly, or easterly breezes prevailed on all our coasts. In force the wind was generally moderate or light, but occasionally blew freshly or strongly at some of our western and south-western stations.

Q 993. 100.—4/80. Wt. 26. H. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending April 12, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, April 6.

Weather fine in Scotland, the N.E. of England, and on both shores of the Irish Sea, but cloudy or overcast in most other places. A thunderstorm passed over England in the afternoon, and showers of rain occurred generally during the day.

Temperature risen W. and N., fallen in the E. and over France; readings uniform, ranging from 43° in the S.W. to 40° in the N.E. Maxima between 50° and 55° generally.

Wind north-westerly on our S.W. coasts, south-westerly and southerly elsewhere, moderate or light except in the W. Wind veering somewhat later to N.W. in the W., and to W. over England, but remaining southerly in Scotland.

Sea rough in the S.W. and N.E.

Barometer rising at our western and north-eastern, and the Norwegian stations, falling elsewhere. Pressure high S. France and Lapland, lowest near the Hebrides, but with numerous depressions passing over us. Barometer rising everywhere later.

Wednesday, April 7.

Weather fine N. Scotland, S.E. of England, and in the Netherlands, dull or cloudy elsewhere, rain in France. Sky nearly clear in S.E. most of day, but thunderstorm occurring in evening; dull and showery in most other places.

Temperature changed little and irregularly, readings very uniform over western Europe, ranging from 39° at Christiansund and in London to 49° at Biarritz. Temperature rising fast S.E. later, and maximum of 60° recorded in London.

Wind easterly in N., northerly in W., westerly in S., and southerly over N. Germany, blowing freshly on our western coasts and in W. France, and reaching a gale in S. France. Wind backing to N. in Scotland, but little other change.

Sea rough in the W. and S.W., and high at Biarritz and Toulon.

Barometer risen everywhere rapidly on our N.W. coasts. Depression noticed near Hebrides on 6th, passing south-eastward and shown over N. England and S. Scotland. Pressure increasing all day, depression still travelling south-eastward.

Thursday, April 8.

Weather fine at some western stations, on the S.E. coast of England and over the Netherlands, dull with fog or mist in most other places. Showery with bright intervals during day.

Temperature fallen in N.W., scarcely changed elsewhere; still uniform, ranging from 39° at Christiansund and Cambridge, to 49° at Scilly and 47° at Toulon. Maxima at inland stations between 50° and 59°.

Wind northerly on all our coasts, but drawing into N.W. over France; light or moderate in the E. and N., fresh on our own and the French western coasts. Little change during day.

Sea rough S.W.

Barometer risen everywhere—quickly over these Islands. Depression noticed on 6th and 7th passing away over Mediterranean. Readings highest off our W. coasts. Pressure increasing steadily.

Friday, April 9.

Weather fine in W. and N., dull in E. and S.E. and over France, with a thunderstorm at Biarritz. Dull and inclement all day in the S.E. and S. with slight showers of rain, fine in W.

Temperature fallen in most places; readings ranging from 38° at Nairn to 49° at Scilly and 48° at Biarritz. Maxima moderately high in W. and N., low in eastern and central districts.

Wind northerly in Scotland, north-easterly elsewhere; light or moderate in N. and W. but blowing freshly or strongly in southern England and over France. No change later.

Sea rough E. and S.E.

Barometer risen except at Toulon; change considerable over these Islands. Pressure still lowest at Toulon highest off our W. coasts. Rise very slight during day and fall commencing at Valentia at night.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts

Saturday, April 10.

Weather fine over Ireland and N. of England, cloudy and overcast elsewhere with rain in N.E. Scotland and over the Straits of Dover. Sky more or less cloudy all day with rain in N.W. and S.E.

Temperature risen at our northern stations and over Scandinavia, fallen elsewhere. Readings very uniform over us, ranging from 40° at Oxford to 46° at Valentia and Aberdeen. Maxima above 50° in the W., between 45° and 50° elsewhere.

Wind south-westerly in W. Norway and north-westerly in Scotland, but north-easterly generally; blowing freshly or strongly on the S.E., S., and S.W. coasts, but lightly in the N. Veering to S.E. in the S. of Ireland later, little other change.

Sea rough off Valentia and Spurn Head.

Barometer falling except in the S.E. of France—most in N. Scandinavia. Readings highest over W. Scotland and low over the Gulf of Lyons and N. of Norway. Pressure decreasing slowly and uniformly all day.

Sunday, April 11.

Weather very fine in countries to the eastward of the North Sea, cloudy or dull over these Islands and W. France, with rain in Ireland and snow at Hawes. Weather much finer during day except in the W.

Temperature changes slight but generally downward. Readings ranging from 46° at Wick and 47° at Scilly, to 38° at Oxford. Maxima low except in N., thermometer not reaching 50° in S.E.

Wind westerly in Norway but easterly (S.E.—N.E.) elsewhere, moderate or light in force generally but blowing freshly in a few places. Wind drawing into S. and S.E. in Ireland later.

Sea moderate to slight.

Barometer falling everywhere, quickly on our western and northern coasts. Area of highest pressure transferred to Scandinavia, but lowest readings still lying over Gulf of Lyons. Pressure decreasing slowly all day.

Monday, April 12.

Weather fine Scandinavia and N. Scotland and in parts of southern England, dull elsewhere. Sky cloudy or dull in most places all day and slight rain falling at night.

Temperature changes slight and irregular. Readings continuing uniform, ranging from 46° in the S.W. and 47° at Wick, to 39° at Liverpool. Maxima between 45° and 52°.

Wind easterly over nearly the whole of our area, moderate in force on most coasts, but very light in Scotland. Easterly breezes holding all day.

Sea rough at Spurn Head.

Barometer rising in the W. and N., falling slowly in the S. and over France. Pressure highest over the Gulf of Bothnia with shallow depressions over the Bay of Biscay and northern Italy. Gradual fall in progress all day.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.	*	*
SCOTLAND, N.	Sumburgh Head									
	Stornoway	50	33	43·4	+0·7	1	0·07	−0·66	38	40
	Wick	54	30	43·6	+0·4	3	0·13	−0·27	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	51	43	47·4	−3·2	2	0·03	−0·44	*	*
	Jersey (Noirmont)	55	39	45·7	−2·9	4	0·22	−0·32	36	39

The above observations, made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	55	32	44·5	+0·5	3	0·21	−0·09	*	*
	Aberdeen	53	35	44·8	+0·9	5	0·27	−0·22	24	25
	Glenalmond	53	31	42·5	−1·7	5	0·45	?	*	*
	Leith	53	31	43·8	−0·5	5	0·44	+0·13	*	*
2. ENGLAND, N.E.	Shields	50	37	43·8	−1·2	5	0·34	−0·05	*	*
	Durham	56	34	42·5	−2·7	5	0·67	−0·24	?	?
	York	58	35	44·1	−1·5	5	0·39	−0·01	?	?
	Spurn Head	52	37	44·0	−2·0	2	0·15	?	*	*
	Kelstern (Lincolnsh.) ℳ	54	32	41·6	−4·1	3	0·32	−0·06	23	25
3. ENGLAND, E.	Hillington ℳ	58	32	43·3	−3·4	4	0·33	?	27	29
	Yarmouth	49	36	42·4	−3·8	5	0·52	+0·12	*	*
	Cambridge	60	32	44·2	−2·7	3	0·13	−0·17	23	25
	Rothamsted	53	31	42·1	−5·0	6	0·31	−0·09	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	59	33	43·6	−2·6	2	0·18	−0·20	*	*
	Nottingham	58	33	43·8	−2·9	2	0·07	−0·37	*	*
	Loughborough	58	35	43·8	−2·9	5	0·12	−0·26	*	*
	Leicester	57	34	43·5	−3·5	2	0·11	−0·20	?	?
	Birmingham (Oscott)	56	35	42·6	−4·9	5	0·20	−0·25	*	*
	Shrewsbury ℳ	53	31	41·7	−5·2	4	0·75	+0·44	*	*
	Churchstoke ℳ								17	18
	Hereford ℳ	55	36	43·5	−4·6	1	0·04	−0·31	*	*
	Cirencester	54	34	42·9	−5·1	4	0·35	−0·11	?	?
	Oxford	56	36	44·6	−3·1	6	0·13	−0·23	?	?
5. ENGLAND, S.	London	60	34	45·3	−2·6	7	0·20	−0·16	11	12
	Marlborough ℳ	57	35	43·7	−4·2	5	0·29	−0·17	*	*
	Strathfield Turgiss ℳ	57	33	44·3	−3·7	3	0·28	−0·12	*	*
	Dover	53	40	44·8	−2·5	4	0·50	+0·05	*	*
	Hastings (St. Leonard's)	57	38	45·2	−2·7	2	0·04	−0·38	*	*
	Southampton	55	36	45·0	−3·5	4	0·12	?	22	24
	Hurst Castle	54	38	44·4	−3·3	3	0·52	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	55	36	46·2	+2·0	2	0·52	?	*	*
	Glasgow	52	35	44·9	−0·1	6	0·54	+0·03	28	29
	Ardrossan	59	35	46·8	+1·8	5	0·40	−0·10	*	*
	Silloth (Cumberland)	53	32	45·1	−0·4	3	0·20	−0·19	?	?
	Douglas (Isle of Man)	52	35	44·6	−1·5	3	0·31	−0·19	45	48
7. ENGLAND, N.W.	Stonyhurst	52	33	43·0	−3·2	3	0·42	−0·18	26	28
	Blackpool ℳ	54	30	42·6	−4·0	2	0·08	−0·27	*	*
	Manchester	52	34	42·6	−4·0	3	0·25	−0·20	*	*
	Liverpool Obsʳ (Bidston)	53	37	44·2	−2·6	1	0·03	−0·27	*	*
	Llandudno ℳ	53	37	45·0	−1·8	2	0·13	?	27	29
	Holyhead	51	40	45·0	−2·0	1	0·06	−0·34	*	*
8. ENGLAND, S.W.	Pembroke	51	37	44·3	−4·6	3	0·18	−0·33	33	35
	Barnstaple	56	40	47·6	−0·8	4	0·24	−0·27	*	*
	Falmouth	52	39	45·6	−3·7	2	0·26	−0·30	43	46
	Plymouth	57	39	46·5	−2·0	2	0·17	−0·34	*	*
	Prawle Point	56	38	44·9	−3·4	2	0·16	?	*	*
9. IRELAND, N.	Londonderry	55	33	44·5	−1·6	5	0·48	−0·07	*	*
	Mullaghmore	53	38	43·2	−3·1	4	0·48	?	*	*
	Markree Castle	55	29	44·0	−2·7	5	0·49	−0·40	43	46
	Brookeborough	54	31	44·6	−1·9	4	0·62	?	*	*
	Armagh	53	34	44·6	−1·6	5	0·52	+0·07	43	46
	Donaghadee	54	38	45·3	−0·9	3	0·43	?	*	*
10. IRELAND, S.	Dublin	54	39	45·8	−1·3	4	0·17	−0·43	48	52
	Parsonstown	?53	31	44·1	−2·7	6	0·42	−0·06	36	39
	Roche's Point	53	39	46·2	−2·0	4	0·78	+0·12	*	*
	Valentia	56	36	48·0	0·0	4	0·35	−0·51	48	52
	Foynes	54	33	44·9	−3·0	3	0·16	?	*	*

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Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

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2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
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4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857–69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866–75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	59	35	46	0 (average).	4	8	2 more.	22	22
	2. ENGLAND, N.E.	64	31	47	0 (average).	4	7	3 more.	29	30
	3. ENGLAND, E.	69	32	49	0 (average).	4	10	6 more.	28	29
	4. MID. COUNTIES	66	30	47	1 below.	4	6	2 more.	19	19
	5. ENGLAND, S.	67	34	49	0 (average).	4	11	7 more.	30	31
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	61	32	46	0 (average).	5	11	2 more.	24	24
	7. ENGLAND, N.W.	62	28	46	2 below.	3	3	1 less.	27	27
	8. ENGLAND, S.W.	60	38	48	2 below.	4	7	2 more.	30	31
	9. IRELAND, N.	59	33	46	1 below.	6	11	6 more.	18	18
	10. IRELAND, S.	60	35	48	1 below.	6	15	10 more.	29	30

General Remarks.

Weather during the first few days was very rainy and unsettled, but by the 17th it had become fine generally and continued so, except at some western stations, during the remainder of the period. Thunderstorms with hail were experienced over the Channel generally on the 14th, and at Hastings, Dover, and Yarmouth on the 15th.

Temperature about equal to the mean in Scotland and the southern and eastern parts of England, but slightly below it in all other parts of the kingdom. The thermometer was generally highest during the latter part of the period, and on the 19th rose to 69° at Cambridge and 67° in London. The lowest of the minima occurred at most places on the 14th, and at Blackpool a reading of 28° was recorded.

Rainfall more than the mean in all districts except "England, N.W.," the excess being rather large in Ireland and the S. and E. of England.

Bright sunshine shows a slight increase over the greater part of England, but a decided decrease in Scotland and Ireland. In the "Midland Counties" and "Ireland, N.," the sun was only to be clearly seen for about a fifth of the time it was above the horizon.

Wind generally north-easterly during the first three days, but on the 16th it changed suddenly to S.W. in the S. and to E. in the N., and on the three following days a southerly current prevailed all over the country. In force the wind was generally moderate in the E. and S.E., but fresh or strong in the W. and N.W., and on the 18th blew a strong gale at many of our western stations.

Q 1097. 100.—4/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending April 19, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, April 13.

Weather very fine over Scandinavia, N. Germany, and E. France, cloudy or dull elsewhere, with rain in central districts. Weather moderately fine generally during day.

Temperature risen in most places. Readings very uniform, ranging from 41° at Oxford to 49° at Scilly. Maxima between 45° and 55° generally, but reaching 58° in London and 57° at Cambridge.

Wind easterly over the North Sea and the greater part of France and these Islands, but drawing into S. in Scotland. Light or moderate generally, but blowing freshly in the S.W. Very light airs during day.

Sea rough round the Shetlands.

Barometer falling over the W. of France and the N. of Scotland and Scandinavia, rising generally. Readings highest Baltic, lowest Bay of Biscay. Falling slowly everywhere during day and pressure very uniform.

Wednesday, April 14.

Weather fine on our N.W. coasts and still fine in Sweden, dull elsewhere, with rain over eastern England. Rain all day in the E. with thunderstorms over the Channel. Heavy rain in S.

Temperature risen a little on the Continent, fallen over these Islands. Readings less uniform, ranging from 36° at York to 48° at Scilly. Maxima only exceeding 50° at a few of our south-western and north-eastern stations.

Wind northerly on most of our coasts but southerly on the eastern shores of the North Sea, and southerly to easterly over France. Light or moderate except at Valentia and Stornoway. No change later.

Sea high at Valentia, rough at Stornoway.

Barometer rising a little in S. France, falling in all other places. Readings highest Baltic and lowest Scotland and W. France. Large depression shown in S.E. later, and pressure increasing on our N.W. coasts.

Thursday, April 15.

Weather dull in nearly all parts of western Europe, with rain at several stations, and snow at Christiansund. Weather unsettled all day, and rain and hail falling in the S.W. and W.

Temperature changes irregular, and readings uniform, ranging from 40° in the N. to 47° at Scilly. Not much change later, and maxima between 45° and 53°.

Wind still northerly in Scotland, but drawing into N.E. and E. over England and Ireland, with W. winds over France. Southerly wind appearing at Scilly later, and wind strong generally.

Sea rough at Valentia and in the N.E.

Barometer rising in the N., falling in S. Depression noticed in S.E. on 14th moving slowly westward over the Channel. Shown near Jersey at 8 a.m., and to the westward of Scilly at 6 p.m. Barometer falling briskly in S.W. during day.

Friday, April 16.

Weather fine and bright over the Channel and at several southern stations, but cloudy in most parts of the British Isles. Rain in N.E. Sky clearing considerably in E. later, but dull and rainy in W.

Temperature risen at our eastern stations, fallen elsewhere. Readings still uniform, ranging from 39° at Ardrossan to 49° at Dover. Rising briskly over England later, and maxima 59° in London and at Cambridge.

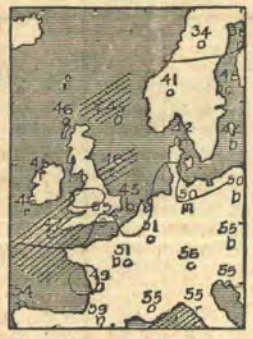
Wind westerly in S. Ireland, south-westerly and southerly over England, and south-easterly and easterly over Scotland. Blowing strongly in the N.E. and N.W., light or moderate elsewhere. South-westerly winds prevailing generally during day, but south-easterly winds at Valentia and in Scotland.

Sea rough in the S.W., N.W., and N.E.

Barometer rising on the Continent and our S. and S.E. coasts, falling briskly elsewhere. Depression noticed above travelling northward and shown over Ireland. Pressure increasing in S. all day but decreasing N., and depression moving slowly northward.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.



Weather during the 24 hours succeeding the date of the Charts.

Saturday, April 17.

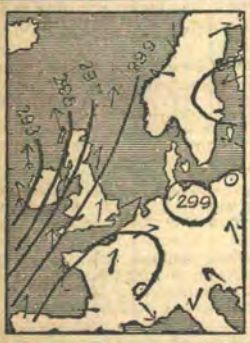
Weather exceedingly fine over central and south-eastern England and the greater part of France, N. Germany, and Scandinavia, dull and cloudy elsewhere. Dull and unsettled in W. all day, very fine in E.

Temperature risen except in Holland; readings ranging from 45° in the Shetlands to 55° in London. Thermometer rising briskly later, and maxima of 64° recorded at Nottingham, Cambridge, and in London.

Wind southerly in nearly all places; light in force in the E., strong in the W. Southerly winds continuing all day, blowing a gale at Valentia.

Sea rough in the S.W. and off the Shetlands.

Barometer falling over France and our S.W. coasts, as well as in Sweden, rising elsewhere. Readings highest over central Europe, lowest off our W. coasts. Brisk increase of pressure reported in S.W., but little other change.



Sunday, April 18.

Weather still exceedingly fine over France, our eastern districts, and Sweden, dull elsewhere, with rain in Ireland. Sky clear all day in S.E. but overcast elsewhere, with rain in W.

Temperature risen in the extreme W. and S.W., fallen in most other places. Readings ranging from 45° at Stornoway to 56° in London. Maxima between 60° and 65° at our central stations.

Wind southerly on all our coasts, blowing a fresh to strong gale in the W. but still light or moderate in the S.E. Little change later, strong southerly winds and gales blowing except in the S.E.

Sea rough all round our south-western, western, and northern coasts.

Barometer risen briskly in the S.E. and over France as well as in Scandinavia, fallen elsewhere. Large depression shown off our western coasts. Pressure recovering in the S.W. at 6 p.m. but still giving way generally. Depression moving northward.

Monday, April 19.

Weather continuing fine over France, the S.E. of England, and N. Germany, dull elsewhere, with rain in a few places. Little change occurring till the evening when rain commenced in S.E.

Temperature fallen a little in Ireland, risen elsewhere. Readings ranging from 49° in N. Ireland and 48° in the Shetlands to 59° in London. Maxima 69° at Cambridge and 67° in London.

Wind still southerly all over the Kingdom, blowing strongly in the S.W., W., and N., and moderately in the S.E. Moderate to strong south-westerly winds experienced during the day, with a strong gale at Shields.

Sea rough in the S.W., W., and N., and high at Valentia.

Barometer rising in the W. but falling in most other places. Pressure still highest over central Europe and lowest off our W. coasts. Barometer rising somewhat in the W. all day but falling decidedly in the S.E. Depression forming in S.E. later.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	53	34	45·1	+2·3	6	0·20	−0·24	*	*
	Stornoway	51	34	43·4	−0·6	4	0·27	−0·29	14	14
	Wick	56	36	45·4	+0·9	4	0·37	−0·03	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	58	41	48·8	−3·0	6	2·48	+2·01	*	*
	Jersey (Noirmont)	59	41	50·2	−0·1	5	0·86	+0·44	30	32

The above observations, made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	59	37	46·2	+0·8	4	0·23	−0·08	*	*
	Aberdeen	55	39	45·7	+0·4	4	0·69	+0·19	22	22
	Glenalmond	57	35	45·3	−0·8	5	1·31	?	*	*
	Leith	58	36	45·2	−0·8	4	0·78	+0·45	*	*
2. ENGLAND, N.E.	Shields	59	36	46·4	−0·1	5	1·29	+0·89	*	*
	Durham	61	31	45·0	−1·6	3	0·32	−0·13	?	?
	York	63	34	47·7	+0·7	4	0·70	+0·30	?	?
	Spurn Head	61	40	47·9	+0·5	4	0·48	?	*	*
	Kelstern (Lincolnsh.) ℳ	64	36	47·6	+0·1	4	0·61	+0·24	29	30
3. ENGLAND, E.	Hillington ℳ	67	36	49·7	+2·0	4	1·08	+0·77	26	27
	Yarmouth	56	41	47·2	−0·7	3	0·74	+0·34	*	*
	Cambridge	69	35	49·4	+1·0	4	1·02	+0·72	30	31
	Rothamsted	64	32	47·5	−1·5	4	0·98	+0·57	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	66	32	48·4	+0·8	3	0·42	+0·03	*	*
	Nottingham	65	35	48·3	−0·2	4	0·31	−0·11	*	*
	Loughborough	65	39	48·3	−0·2	5	0·51	+0·14	*	*
	Leicester	64	39	48·2	−0·5	6	0·39	+0·10	?	?
	Birmingham (Oscott)	61	36	46·6	−2·4	3	0·46	+0·01	*	*
	Shrewsbury ℳ	60	30	46·2	−2·4	4	0·34	−0·01	*	*
	Churchstoke ℳ								22	23
	Hereford ℳ	57	36	47·0	−2·6	5	0·42	+0·07	*	*
	Cirencester	60	34	46·2	−3·3	5	1·02	+0·56	15	15
	Oxford	64	38	47·7	−1·8	4	1·20	+0·83	?	?
5. ENGLAND, S.	London	67	39	50·2	+0·7	4	1·30	+0·93	30	31
	Marlborough ℳ	62	36	47·3	−2·1	6	1·38	+0·91	*	*
	Strathfield Turgiss ℳ	66	34	48·1	−1·5	4	1·06	+0·63	*	*
	Dover	60	44	50·0	+1·1	4	0·65	+0·22	*	*
	Hastings (St. Leonard's)	59	43	50·1	+0·7	4	1·27	+0·82	*	*
	Southampton	62	39	49·4	−0·1	4	0·87	?	30	31
	Hurst Castle	54	41	48·2	−1·4	4	0·84	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	56	38	47·0	+1·3	5	2·52	?	*	*
	Glasgow	56	37	46·1	−0·3	7	0·58	+0·05	19	19
	Ardrossan	54	37	45·5	−1·0	5	0·44	−0·06	*	*
	Silloth (Cumberland)	61	34	47·4	+0·6	3	0·52	+0·12	?	?
	Douglas (Isle of Man)	53	32	45·7	−1·8	4	1·18	+0·71	28	29
7. ENGLAND, N.W.	Stonyhurst	58	34	46·4	−1·3	3	0·19	−0·41	24	24
	Blackpool ℳ	58	28	46·0	−2·0	5	0·31	−0·03	*	*
	Manchester	60	31	43·6	−4·6	1	0·17	−0·28	*	*
	Liverpool Obsr (Bidston)	62	39	48·1	−0·3	3	0·27	0·00	*	*
	Llandudno ℳ	60	34	47·5	−1·4	3	0·23	?	29	30
	Holyhead	55	37	46·9	−1·6	4	0·51	+0·11	*	*
8. ENGLAND, S.W.	Pembroke	52	40	46·5	−3·8	5	0·98	+0·48	31	32
	Barnstaple	60	38	50·1	+0·2	5	0·49	−0·01	*	*
	Falmouth	57	41	48·4	−2·2	5	0·77	+0·21	28	29
	Plymouth	57	40	49·8	−0·1	2	0·42	−0·08	*	*
	Prawle Point	53	41	47·0	−2·9	5	0·66	?	*	*
9. IRELAND, N.	Londonderry	59	34	46·5	−0·9	7	0·94	+0·39	*	*
	Mullaghmore	57	36	47·2	−0·4	7	1·20	?	*	*
	Markree Castle	58	35	47·2	−0·6	7	0·72	+0·36	20	20
	Brookeborough	57	34	45·4	−2·3	6	1·28	?	*	*
	Armagh	59	33	46·0	−1·5	6	1·53	+1·06	16	16
	Donaghadee	53	35	46·1	−1·3	5	0·70	?	*	*
10. IRELAND, S.	Dublin	59	38	48·5	+0·2	5	0·92	+0·32	17	17
	Parsonstown	59	35	46·5	−2·0	6	1·69	+1·24	27	28
	Roche's Point	60	39	48·7	−1·0	6	1·78	+1·16	*	*
	Valentia	55	40	48·4	−1·1	7	2·11	+1·29	43	44
	Foynes	59	39	47·5	−1·5	7	1·11	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 17.] WEEK ENDING MONDAY, APRIL 26, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positons of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.)				Rainfall. (Amounts in tenths of an inch.)			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	62	34	47	0 (average).	5	11	7 more.	36	35
	2. ENGLAND, N.E.	61	36	48	0 (average).	3	4	0 (average).	46	45
	3. ENGLAND, E.	63	32	49	0 (average).	5	3	1 less.	43	43
	4. MID. COUNTIES	66	32	49	1 below.	3	1	3 less.	45	45
	5. ENGLAND, S.	64	32	50	1 below.	3	2	3 less.	43	44
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	59	32	47	1 below.	4	13	7 more.	47	46
	7. ENGLAND, N.W.	58	32	48	2 below.	5	4	0 (average).	43	43
	8. ENGLAND, S.W.	65	37	50	1 below.	2	2	2 less.	60	61
	9. IRELAND, N.	58	34	48	1 below.	6	12	7 more.	50	49
	10. IRELAND, S.	59	35	49	1 below.	4	9	2 more.	48	48

General Remarks.

Weather during this period has been generally fine and bright; thunderstorms, however, were experienced at some of our inland stations either on the 21st or 25th, and very heavy rain occurred in Ireland and Scotland on the 21st.

Temperature equal to the mean in "Scotland, E.," "England, N.E.," and "England, E.," but a little below it in all other districts. The highest of the maxima (66° at Oxford and Nottingham) were registered on the 20th, and the lowest of the minima either on the 23rd or 26th.

Rainfall considerably more than the mean in Ireland and Scotland, equal to the mean in the N.W. and N.E. of England, and less than the mean value in all other places.

Bright sunshine shows a marked increase, and the number of hours considerable uniformity over the kingdom: the sun was obscured the least in "England, S.W.," and most in "Scotland, E.," where the number of hours during which it could be seen was only about a third of the time it was above the horizon.

Wind south-westerly during the first two days, westerly or west-north-westerly on the 22nd, 23rd, and 24th, and northerly during the remainder of the period. In force it was generally moderate or fresh, but on the 21st the south-westerly wind blew strongly or with the force of a gale on all except our S.E. coasts.

Q 1191. 100.—4/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending April 26, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, April 20.

Weather fine on our N.E. and S.W. coasts, as well as over the greater part of France and the Netherlands, dull elsewhere, with rain in places. Fine all day generally, but dull in extreme W.

Temperature fallen over these Islands and risen on the Continent generally; decrease considerable in S.E. and readings uniform, ranging from 47° to 52°. Maxima 66° at Oxford and Nottingham, and 63° in London.

Wind light or moderate in force except on our extreme N.W. coasts, blowing from W. in the S. and from S. in the N. Wind increasing to a fresh breeze later, but remaining westerly to southerly.

Sea rough in the S.W., W., and N.W.

Barometer fallen at our south-eastern stations and in the countries to the eastward of the North Sea, rising slowly elsewhere. Pressure highest over Spain, lowest off our N.W. coasts, with small depressions in S.E. Mercury rising slowly all day.

Wednesday, April 21.

Weather fine over the W. of France, the Netherlands, and S.E. of England, dull generally with rain over the whole of Ireland and Scotland. Overcast all day with very heavy rain in the W. and N.

Temperature fallen except in the S.W.; readings ranging from 43° in the Hebrides to 53° in London. Rising in the E., falling in the W., later. Maxima between 55° and 60° generally.

Wind south-westerly all over England and Ireland and south-easterly in Scotland; light in force on our S.E. coasts, fresh or strong elsewhere. Wind veering to N. in Ireland and W. in Scotland later, but remaining south-westerly over England and blowing a gale in the W. and N.E.

Sea rough all round our W. and S.W. coasts.

Barometer rising over France, N. Germany, and our south-eastern stations, falling elsewhere. Large depression lying off our N.W. coasts. Depression passing north-eastward later, but fresh one appearing over Ireland.

Thursday, April 22.

Weather fine or moderately so generally, but wet in the E. of Scotland, and dull at the south-eastern stations and on the eastern shores of the North Sea. Showers in the S. and S.W. later, but weather fine on the whole.

Temperature fallen in most places; readings ranging from 42° at Aberdeen to 54° at Nottingham. Maximum of 61° recorded at Nottingham, but maxima elsewhere between 53° and 59°.

Wind north-westerly over Scotland and Ireland, westerly over England, and south-westerly and southerly over the North Sea. Blowing freshly generally. Wind veering a little later, but no great change.

Sea rough at Scilly, Mullaghmore, and Spurn Head.

Barometer rising at our northern and western stations, falling elsewhere. Large depression noticed on 21st shown off Norwegian coast, smaller one near Aberdeen. Recovery taking place all over Kingdom during day.

Friday, April 23.

Weather cloudy and showery on our extreme N.W. coasts, in S.W. France, and on the eastern shores of the North Sea, fine and bright elsewhere. Becoming cloudy in W. and N. later, but very fine all day in England.

Temperature fallen over France, N. Germany, and the S.E. of England, risen elsewhere; readings moderately high and uniform, ranging between 47° and 53°. Maxima slightly exceeding 60° over central England.

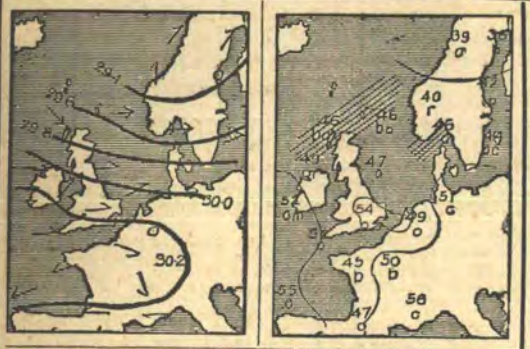
Wind westerly on nearly all our coasts, but drawing into S.W. over Scandinavia, with easterly winds over the Bay of Biscay. Wind moderate in force generally at first, but freshening later.

Sea rough near the Scillys and Shetlands.

Barometer rising over these Islands and their neighbourhood, falling over S. France and the Baltic. Readings highest off our S.W. coasts, and lowest over N. Sweden. Very little change during day.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.



Weather during the 24 hours succeeding the date of the Charts.

Saturday, April 24.

Weather fine over the N. of France and the Channel, and in parts of the N. of Scotland, dull generally, with rain at Wick and in the N. of England. Sky clearing in N. later, but dull all day in S.

Temperature risen slightly in S.E., changed little and irregularly elsewhere; readings ranging from 43° at Wick to 54° in London. Maxima below 60°, except at Nottingham and Oxford, below 50° in N. Scotlond.

Wind westerly on nearly all our coasts and over North Sea, but south-westerly in Scandinavia and easterly over France. Blowing freshly on our more northern coasts. Wind veering to N.W. during day, but still blowing strongly.

Sea rough North.

Barometer rising over France, falling slowly over these Islands, and briskly over Norway and Sweden. Readings highest over Channel and N. France, with large depression in far N. Pressure giving way in E. and S. later, and increasing in N.W.

Sunday, April 25.

Weather fine over nearly the whole of these Islands, but with showers of rain in the E. of Scotland. Sky cloudy on the Continent, except over N. Germany. Fine generally all day.

Temperature fallen except over France. Readings ranging from 41° at Stornoway to 53° in London. Maxima below 60° except at Oxford, and below 50° over the greater part of Scotland.

Wind north-westerly all over these Islands and the North Sea, but drawing into N. and N.E. over France. Blowing freshly at several northern and western stations. Veering towards N. on most of our coasts later.

Sea moderate to slight except at Spurn Head and round the northern Islands.

Barometer falling briskly over N. Sweden, and slightly over France and N. Germany, rising elsewhere. Readings highest off our S.W. coasts, lowest over the Baltic. Pressure increasing slowly during day except over France.

Monday, April 26.

Weather fine in nearly all parts of western Europe, but wet in the E. of Scotland and E. of England, and cloudy over Scandinavia. Slight showers in E. and S. later, but fine generally.

Temperature fallen in nearly all places. Readings ranging from 39° at Nairn and Cambridge to 48° in the S.W. Maxima between 50° and 55° in most districts, but below 50° in the N.

Wind northerly over nearly the whole of our area, but drawing into west over N. Germany and Denmark. Fresh or strong in force in many places. Wind drawing into N.E. in the S. later, little other change.

Sea rough at Valentia, Stornoway, and Spurn Head.

Barometer falling over France, rising elsewhere—rapidly in Sweden. Area of high pressure over our western coasts, with depressions over the Baltic and S. of France. Mercury rising slowly all day except over France.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	51	35	44·2	+0·3	7	0·80	+0·35	*	*
	Stornoway	53	36	44·3	−0·7	6	0·91	+0·31	49	47
	Wick	58	34	46·0	+0·4	4	0·57	+0·17	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	56	46	50·2	−2·8	3	0·08	−0·37	*	*
	Jersey (Noirmont)	58	43	49·8	−1·6	4	0·09	−0·31	66	67

The above observations made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	60	37	46·7	+0·2	5	0·50	+0·15	*	*
	Aberdeen	58	35	47·1	+0·5	7	1·75	+1·25	36	35
	Glenalmond	58	34	45·6	−1·6	2	1·25	?	*	*
	Leith	62	36	48·3	+1·1	4	0·98	+0·63	*	*
2. ENGLAND, N.E.	Shields	60	39	48·0	0·0	3	0·39	−0·01	*	*
	Durham	60	36	47·8	−0·2	2	0·36	−0·09	?	?
	York	61	37	49·3	+0·9	3	0·35	−0·05	51	50
	Spurn Head	57	41	48·4	−0·1	5	0·19	−0·17	*	*
	Kelstern (Lincolnsh.) ℳ	60	36	48·0	−1·0	4	0·52	+0·12	40	40
3. ENGLAND, E.	Hillington ℳ	62	32	48·9	−0·1	6	0·45	+0·03	40	40
	Yarmouth	59	39	49·3	+0·1	3	0·25	−0·15	*	*
	Cambridge	63	36	50·3	+0·2	4	0·34	0·00	46	46
	Rothamsted	61	34	48·5	−1·8	5	0·31	−0·14	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	60	37	49·7	+0·8	1	0·03	−0·34	*	*
	Nottingham	66	34	49·8	−0·1	2	0·10	−0·34	*	*
	Loughborough	60	35	49·3	−0·7	6	0·19	−0·19	*	*
	Leicester	60	37	49·2	−1·1	6	0·36	+0·07	?	?
	Birmingham (Oscott)	60	36	47·9	−2·3	3	0·23	−0·22	*	*
	Shrewsbury ℳ	59	32	47·1	−3·2	4	0·11	−0·29	*	*
	Churchstoke ℳ								41	41
	Hereford ℳ	61	35	48·5	−2·5	3	0·10	−0·27	*	*
	Cirencester	61	33	47·8	−3·1	3	0·08	−0·38	46	46
	Oxford	66	37	50·4	−0·7	3	0·07	−0·30	48	49
5. ENGLAND, S.	London	64	36	51·0	0·0	2	0·11	−0·29	36	36
	Marlborough ℳ	61	34	48·7	−2·3	3	0·14	−0·33	*	*
	Strathfield Turgiss ℳ	63	32	49·3	−1·7	2	0·03	−0·42	*	*
	Dover	58	40	49·9	−0·1	3	0·44	+0·03	*	*
	Hastings (St. Leonard's)	59	41	48·9	−1·8	2	0·17	−0·25	*	*
	Southampton	61	36	49·7	−0·9	4	0 25	?	50	51
	Hurst Castle	59	39	49·3	−1·5	2	0·03	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	53	32	45·2	−1·5	5	1·66	?	*	*
	Glasgow	56	38	47·2	−0·6	5	1·80	+1·26	42	41
	Ardrossan	53	37	46·9	−0·9	5	1·74	+1·24	*	*
	Silloth (Cumberland)	59	40	48·2	+0·2	3	0·72	+0·32	?	?
	Douglas (Isle of Man)	55	39	47·5	−1·1	4	0·53	+0·08	52	51
7. ENGLAND, N.W.	Stonyhurst	55	37	46·4	−2·6	7	0·51	−0·05	45	45
	Blackpool ℳ	54	37	47·9	−1·1	5	0·29	−0·05	*	*
	Manchester	57	32	46·0	−4·0	5	0·29	−0·16	*	*
	Liverpool Obsr (Bidston)	57	38	48·4	−1·6	3	0·18	0·08	*	*
	Llandudno ℳ	58	41	49·3	−0·2	3	0·36	?	40	40
	Holyhead	54	40	47·9	−2·0	4	0·50	+0·15	*	*
8. ENGLAND, S.W.	Pembroke	53	41	48·4	−3·1	3	0·09	−0·40	59	60
	Barnstaple	65	42	53·4	+2·2	2	0·09	−0·39	*	*
	Falmouth	56	41	49·2	−2·8	4	0·37	−0·19	60	61
	Plymouth	61	37	50·5	−0·5	2	0·26	−0·24	*	*
	Prawle Point	? 57	38	49·2	−2·0	1	0·10	?	*	*
9. IRELAND, N.	Londonderry	57	36	47·3	−1·1	6	0·99	+0·45	*	*
	Mullaghmore	54	39	48·1	−0·7	6	0·82	?	*	*
	Markree Castle	58	38	47·7	−1·2	4	0·84	+0·44	45	45
	Brookeborough	56	34	47·1	−1·6	5	1·20	?	*	*
	Armagh	56	36	47·6	−1·3	6	1·65	+1·20	54	53
	Donaghadee	58	40	48·4	−0·1	6	1·53	?	*	*
10. IRELAND, S.	Dublin	59	38	49·1	−0·8	6	0·40	−0·17	51	51
	Parsonstown	56	35	47·5	−2·2	5	0·97	+0·52	43	43
	Roche's Point	59	40	50·2	−0·7	2	0·49	−0·12	*	*
	Valentia	57	37	49·7	−1·0	3	1·21	+0·42	50	51
	Foynes	56	39	48·8	−2·1	4	0·40	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 18.] WEEK ENDING MONDAY, MAY 3, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	64	31	47	1 below.	3	1	3 less.	47	44
	2. ENGLAND, N.E.	68	29	45	5 below.	1	less than ½	4 less.	53	51
	3. ENGLAND, E.	64	28	46	5 below.	2	1	3 less.	50	49
	4. MID. COUNTIES	67	27	46	6 below.	1	less than ½	4 less.	46	45
	5. ENGLAND, S.	66	28	47	5 below.	1	1	3 less.	48	47
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	65	31	47	2 below.	1	less than ½	5 less.	50	48
	7. ENGLAND, N.W.	59	29	46	5 below.	1	less than ½	4 less.	59	57
	8. ENGLAND, S.W.	58	30	47	6 below.	1	1	4 less.	56	55
	9. IRELAND, N.	63	28	47	3 below.	2	2	3 less.	57	55
	10. IRELAND, S.	62	29	48	3 below.	1	2	4 less.	58	56

General Remarks.

Weather generally fine and for the more part bright in all parts of the kingdom. On April 28th and May 3rd, however, the sky was very cloudy or overcast, and rain fell in a few places; a sharp thunderstorm, accompanied by hail, was experienced over our southern counties during the afternoon of the 3rd.

Temperature below the mean for the time of year in all districts. Over Ireland and Scotland the deficit was only 1° to 3°, but in England as much as 5° or 6°. The highest of the maxima (68° at Durham and 67° at Loughboro') occurred on Sunday (2nd), and the lowest minima on April 30th. Several slight frosts were registered, and at many inland stations the thermometer fell to 28°—at Bantry to 27°.

Rainfall much less than the mean in all districts, the largest amounts reported being two tenths in "Ireland, N.," and "Ireland, S."

Bright sunshine shows some further increase in nearly all parts of the kingdom: the number of hours recorded being about half those during which the sun was above the horizon. The amount of sunshine was moderately equable over the country, but was rather larger in Ireland and the western parts of England than elsewhere.

Wind northerly to north-easterly during the first three days over the whole kingdom, but became westerly in Scotland and easterly at the southern stations on April 30th. During May 1st and 2nd it varied greatly in directions over all parts of the country and finally settled into N. on all our coasts. In force it was generally light or moderate, but blew rather strongly from N.E. on our southern coasts during the first half of the week, and rather stiffly from the southward in the W. and N. on the 1st and 2nd instant.

Q 1377. 100.—5/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending May 3, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, April 27.

Weather fine at the great majority of stations, but cloudy and rainy in the S.E. and S. of France, the S.E. of England, and in Norway. Weather fine all day in most districts, but showers falling in E.

Temperature fallen on our S. coast and over the Continent generally, risen elsewhere. Readings uniform, ranging from 41° at York to 48° at Valentia and 50° at Toulon. Maxima low, particularly in the E. and S.

Wind northerly on nearly all our coasts, but drawing into N.E. over the Channel and France, blowing strongly in the S.E. and S. of England, and reaching a gale in France. No change during day.

Sea rough on many parts of our E. and S. coasts.

Barometer rising generally, but falling a little in N. Scandinavia. Anticyclone over our western coasts, with low pressures over Lapland and the Gulf of Lyons. Slight general fall occurring later.

Wednesday, April 28.

Weather fine in Ireland, cloudy or dull in most other places. Rain falling in N. France and at Wick, snow at Christiansund. Sky cloudy in most places all day. Slight rain in N. and E.

Temperature fallen in Sweden, risen slightly elsewhere. Readings still uniform, ranging from 43° in the Shetlands to 49° at Valentia. Temperature low all day in the eastern and central districts.

Wind little changed, still northerly over Scandinavia and most of our coasts, and drawing into N.E. over the Channel and France. Light or moderate in the N., strong over the Channel and France.

Sea rough in the Channel and off Ushant.

Barometer rising briskly in Norway, falling elsewhere. General distribution not much changed; anticyclone still lying over our western stations, with areas of low pressure over the Baltic and S. of France. Mercury falling all day except in the N.

Thursday, April 29.

Weather fine over Denmark, N. Germany, and some of our south-eastern and eastern stations, cloudy or dull generally. Rain still falling in Brittany. Weather fine, except in extreme W. during day.

Temperature fallen over Great Britain, risen elsewhere. Readings ranging from about 44° on our E. coast to 51° in W. Ireland. Temperature again low all day—particularly in E.

Wind variable in Scotland, but north-easterly over the North Sea, on most of our coasts, and over France. Moderate or strong in force. No change of importance later.

Sea rough in the E., S.E., and S.

Barometer rising everywhere, quickly in Sweden. Anticyclone lying over Scotland and the North Sea, with large depression over France and central Europe. Mercury rising slowly all day.

Friday, April 30.

Weather very fine and bright, except at Valentia and Stornoway. Sky becoming rather cloudy in Scotland later, but fine bright weather lasting all day elsewhere.

Temperature risen a little in Scotland, and briskly in Scandinavia, fallen elsewhere; readings exceedingly uniform over western Europe, varying between 40° and 50°. Maxima below 50° in England E., but between 50° and 59° elsewhere.

Wind westerly and north-westerly over Scotland, northerly over the greater part of England, and north-easterly over the Channel and France. Moderate at our own, but strong at the French stations. Calms reported from Ireland. Wind backing in Scotland later.

Sea rough in the Channel.

Barometer falling slowly in the N., but rising generally. Large anticyclone (30·5 ins.) lying over these Islands, with low pressures over Lapland and S. France. Pressure giving way everywhere during day, but decrease uniform.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, May 1.

Weather dull on our extreme north-western and northern coasts and over Norway, still fine elsewhere; rain falling in the Shetlands and snow at Bodö. Fine all day except in N.W. and W.

Temperature fallen in the S.E. of England, risen elsewhere; readings still uniform, ranging from 43° over central England to 52° at Aberdeen. Maxima exceeding 60° over central England and the E. of Scotland.

Wind southerly to westerly in the W. and N., light and variable over our central districts, and north-easterly to easterly in the S. and over France. Light or moderate except over the Bay of Biscay. Southerly wind in the W. extending and becoming stronger later.

Sea moderate to slight.

Barometer falling briskly over these Islands, rising slowly over France. Anticyclone (30·2 ins.) still lying over us. Pressure decreasing briskly all day, depression forming in the S. later.

Sunday, May 2.

Weather fine in most parts of Great Britain as well as over the N. of France and N. Germany, dull and rainy over Ireland and S. France. Fine bright weather all day except in W.

Temperature fallen on our western coasts and in the N.W. of France, risen a little in most other places; readings ranging from 44° in Yorkshire and at Hurst Castle, to 53° at Aberdeen. Maxima above 60° over the eastern parts of England and Scotland.

Wind westerly and south-westerly over Scotland, northerly over Ireland, easterly over the Continent, and north-easterly over England. Blowing strongly in W. and N. Moderate northerly and north-easterly winds during day.

Sea rough W. and N.W.

Barometer falling over the whole of western Europe. Distribution irregular; areas of high pressure lying over Ireland and Denmark, and of low pressure over Scotland and France. Barometer falling all day.

Monday, May 3.

Weather fine in parts of Scotland, N. Germany, Denmark and Sweden, dull or cloudy generally, with rain in the S.W. Sky cloudy all day and sharp thunderstorm in the S.E. of England in the afternoon.

Temperature fallen considerably over these Islands, risen on the Continent. Readings uniform, ranging from 41° at Stornoway to 48° in the S. of England. Maxima low generally.

Wind easterly to north-easterly over the North Sea and the eastern parts of the Kingdom, northerly on our western and northern coasts. Moderate to fresh northerly winds prevailing on most coasts during the day.

Sea rough in the S.W. and off the Hebrides.

Barometer rising slowly in N. Scotland and over Scandinavia as well as in S. France, falling elsewhere. Pressure highest over the Baltic, lowest over France. The rise in the N. extending slowly southward later.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ➢⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	54	35	45·5	+0·6	3	0·10	−0·30	*	*
	Stornoway	53	37	46·3	+0·1	2	0·24	−0·32	25	23
	Wick	58	33	45·9	−0·8	2	0·05	−0·30	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	56	43	48·1	−6·0	2	0·03	−0·36	*	*
	Jersey (Noirmont)	59	42	48·2	−4·0	2	0·02	−0·38	66	66

The above observations made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	61	35	47·5	−0·1	2	0·05	−0·30	*	*
	Aberdeen	63	32	47·5	−0·4	4	0·11	−0·35	47	44
	Glenalmond	59	31	46·5	−2·1	1	0·11	?	*	*
	Leith	64	32	47·8	−0·7	4	0·13	−0·23	*	*
2. ENGLAND, N.E.	Shields	57	34	44·8	−4·4	0	—	−0·40	*	*
	Durham	68	30	45·3	−4·2	1	0·02	−0·43	?	?
	York	63	29	46·3	−3·7	3	0·07	−0·33	50	48
	Spurn Head	51	39	44·7	−5·3	2	0·03	?	*	*
	Kelstern (Lincolnsh.) ⊕	59	30	43·4	−7·3	0	—	−0·35	56	54
3. ENGLAND, E.	Hillington ⊕	63	29	45·7	−4·8	3	0·03	−0·36	48	47
	Yarmouth	49	40	49·8	−0·9	1	0·03	−0·37	*	*
	Cambridge	64	30	46·1	−5·5	3	0·18	−0·19	52	51
	Rothamsted	60	28	43·8	−7·9	2	0·03	−0·38	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	65	27	47·4	−2·7	0	—	−0·38	*	*
	Nottingham	66	30	46·7	−4·8	2	0·07	−0·36	*	*
	Loughborough	67	30	47·0	−4·4	0	—	−0·40	*	*
	Leicester	62	32	45·6	−6·2	3	0·03	−0·28	?	?
	Birmingham (Oscott)	63	31	45·8	−5·6	0	—	−0·48	*	*
	Shrewsbury ⊕	63	27	44·5	−7·4	0	—	−0·41	*	*
	Churchstoke ⊕	63	28	43·6	−8·9	0	—	?	40	39
	Hereford ⊕	63	31	46·0	−6·5	1	0·11	−0·29	*	*
	Cirencester	64	32	45·6	−6·7	0	—	−0·45	45	44
	Oxford	62	31	45·0	−7·5	3	0·06	−0·33	53	52
5. ENGLAND, S.	London	64	32	51·8	−0·3	2	0·23	−0·17	36	35
	Marlborough ⊕	64	29	45·5	−6·8	1	0·01	−0·47	*	*
	Strathfield Turgiss ⊕	66	28	45·7	−6·6	0	—	−0·42	*	*
	Dover	56	41	47·1	−3·9	3	0·25	−0·16	*	*
	Hastings (St. Leonard's)	62	37	48·1	−3·9	2	0·05	−0·36	*	*
	Southampton	64	34	47·6	−4·4	0	—	?	60	59
	Hurst Castle	58	32	45·9	−6·2	1	0·07	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	65	34	49·4	+1·4	1	0·09	?	*	*
	Glasgow	58	34	47·6	−1·5	0	—	−0·55	41	39
	Ardrossan	56	34	46·5	−2·5	1	0·01	−0·49	*	*
	Silloth (Cumberland)	62	31	45·7	−3·6	1	0·05	−0·35	46	44
	Douglas (Isle of Man)	58	31	44·7	−5·3	0	—	−0·41	64	62
7. ENGLAND, N.W.	Stonyhurst	59	31	45·5	−5·0	0	—	−0·54	61	59
	Blackpool ⊕	58	29	44·1	−6·4	0	—	−0·35	*	*
	Manchester	59	32	45·4	−5·8	0	—	−0·45	*	*
	Liverpool Obsy (Bidston)	58	36	47·0	−4·2	1	0·05	−0·24	*	*
	Llandudno ⊕	56	35	46·3	−4·7	1	0·16	?	57	55
	Holyhead	56	40	47·1	−3·9	1	0·02	−0·33	*	*
8. ENGLAND, S.W.	Pembroke	54	37	45·9	−6·6	2	0·03	−0·46	58	57
	Barnstaple †	?66	?36	?51·1	?−1·5	2	0·05	−0·43	*	*
	Falmouth	56	38	46·7	−6·7	0	—	−0·55	54	53
	Plymouth	58	36	47·5	−4·9	1	0·31	−0·18	*	*
	Prawle Point	58	30	45·8	−6·7	2	0·21	?	*	*
9. IRELAND, N.	Londonderry	63	33	47·0	−2·7	3	0·11	−0·39	*	*
	Mullaghmore	58	38	48·7	−1·3	2	0·28	?	*	*
	Markree Castle	57	28	44·8	−5·2	3	0·36	−0·10	61	59
	Brookeborough	61	29	46·4	−3·5	1	0·06	?	*	*
	Armagh	60	35	47·0	−3·1	2	0·09	−0·31	53	51
	Donaghadee	60	38	46·9	−3·1	0	—	?	*	*
10. IRELAND, S.	Dublin	62	37	47·4	−3·6	0	—	−0·52	61	59
	Parsonstown	62	29	45·7	−5·0	1	0·04	−0·44	52	50
	Roche's Point	61	38	49·0	−2·8	2	0·68	+0·04	*	*
	Valentia	60	37	49·6	−2·2	1	0·10	−0·65	61	60
	Foynes	60	35	49·9	−1·2	1	0·09	?	*	*

Stations marked ⊕ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The temperature values reported from Barnstaple are very doubtful.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 19.] WEEK ENDING MONDAY, MAY 10, 1880. [*Price 2d.*
[*Annual subscription, post paid*, 12*s.* 6*d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positons of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.)				Rainfall. (Amounts in tenths of an inch.)			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	60	30	46	3 below.	2	1	3 less.	25	23
	2. ENGLAND, N.E.	60	28	45	6 below.	4	3	1 less.	32	30
	3. ENGLAND, E.	59	33	46	6 below.	4	3	2 less.	39	36
	4. MID. COUNTIES	62	31	47	6 below.	2	2	2 less.	41	39
	5. ENGLAND, S.	62	33	48	5 below.	2	1	3 less.	30	28
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	62	32	48	2 below.	1	1	4 less.	51	47
	7. ENGLAND, N.W.	66	33	47	6 below.	1	1	3 less.	54	50
	8. ENGLAND, S.W.	66	38	51	3 below.	1	1	4 less.	66	63
	9. IRELAND, N.	64	30	48	4 below.	2	1	4 less.	54	50
	10. IRELAND, S.	63	32	50	3 below.	1	1	5 less.	52	48

General Remarks.

Weather has been very dry and the sky moderately clear in nearly all parts of the kingdom. In the S.E. and N.E. of England and over Scotland, however, more cloud was reported than elsewhere, and at the close of the period the weather was dull at all our stations, and slight rain fell over the greater part of England.

Temperature again below the mean in all districts, as much as 5° or 6° below at most of the English stations, and from 2° to 4° elsewhere. The maxima were generally very low for the season, while over the central and northern parts of Great Britain and central Ireland several slight frosts were registered at night, the lowest of the minimum readings being 28° at Durham.

Rainfall again less than the mean in all districts.

Bright sunshine, except in the western parts of Great Britain, shows a decided decrease, and in the S. and E. of England and E. of Scotland the number of hours recorded was only equal to about a quarter of the time during which the sun was above the horizon. The small per-centage indicated for London is very striking.

Wind generally between N. and N.E. all over the kingdom; and, though moderate or light on most days, blew freshly at times at some of our eastern and southern stations. On the 8th and 10th, however, the direction was more variable, south-easterly and southerly winds being reported from our south-western coasts on the former day, and light westerly airs from the N. of England on the latter.

Q 1443. 100.—5/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending May 10, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, May 4.

Weather fine at most of our more northern and western stations, as well as over France, but sky cloudy or overcast generally. Fine in most places during day but dull and rainy in the E. in evening.

Temperature fallen over France, risen slightly elsewhere. Readings uniform, ranging from 43° at Nairn to 51° at Scilly. Maxima between 50° and 55° in the N. and 55° and 58° in the S. and W.

Wind northerly over the greater part of the kingdom but drawing into N.E. in the S. and over the Channel. Little change during day, but south-westerly gale blowing in N. of Norway in evening.

Sea rough off the S.W. of Ireland and at the mouth of the Humber.

Barometer rising in all parts of western Europe but falling in the extreme N. of Norway and Sweden. Area of high pressure on our northern and western coasts, with low pressures over France, N. Germany, and N.W. of Norway. Slight increase in progress all day.

Wednesday, May 5.

Weather cloudy in the E. and dull in the S.E., with rain over the Straits of Dover, fine or moderately so elsewhere. Cloudy and showery all day in the S.E. and E., but fine in most other places.

Temperature little changed; uniform over western Europe, ranging from 45° at Nairn, to 52° at Scilly and 55° at Toulon. Maxima below 50° in the E. of England, between 55° and 60° generally.

Wind northerly in nearly all parts of the kingdom, but drawing into N.E. over the Channel and France. Moderate on our coasts, fresh over the Bay of Biscay. Northerly breezes continuing all day.

Sea rough off the Yorkshire coast.

Barometer falling slowly in the N., but still rising in most places. Pressure highest over Ireland and low over Spain and central Europe. Barometer falling on the Continent later, scarcely changing over these Islands.

Thursday, May 6.

Weather fine over our central and western districts, as well as over parts of France and Scandinavia, but cloudy or dull elsewhere, with snow in the Shetlands. Sky clearing later, and weather fine and bright at most stations.

Temperature changes very slight generally, but considerable fall reported from the Shetlands, and slight fall from Norway and Sweden; readings ranging from 37° at Sumburgh Head to 52° at Scilly. Temperature low all day, and slight frost over inland stations at night.

Wind still northerly on most of our coasts, and north-easterly over the Channel and France, but strong westerly wind reported from Norway. Wind increasing somewhat later, and blowing freshly in many places.

Sea rough off the Shetlands and at Christiansund.

Barometer falling over Scotland, Scandinavia, and S. France, scarcely changing elsewhere. Pressure highest over Ireland, low over Sweden and the Gulf of Lyons. Little change during day, and distribution unaltered.

Friday, May 7.

Weather fine and bright over England, Ireland, and N. France, dull in Scotland and S. France. Weather fine generally all day, but very slight rain falling in N.E. Scotland.

Temperature fallen a little in most places; readings uniform, ranging from 39° in the Shetlands, to 50° at Scilly and 55° at Biarritz. Maxima between 50° and 55° generally, but below 50° in Scotland.

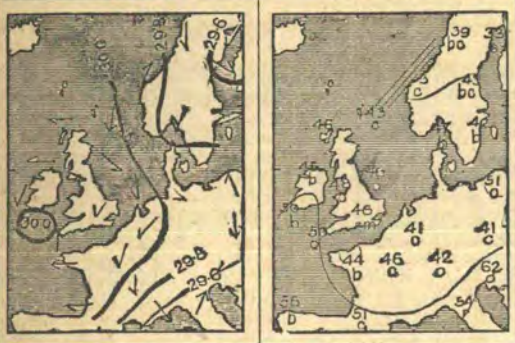
Wind south-westerly in the N. of Scandinavia, northerly in nearly all other places; fresh in force over the North Sea and over France, light in the W. Little change during day.

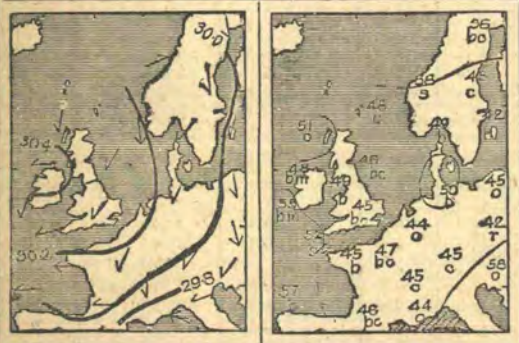
Sea rough in the Straits of Dover.

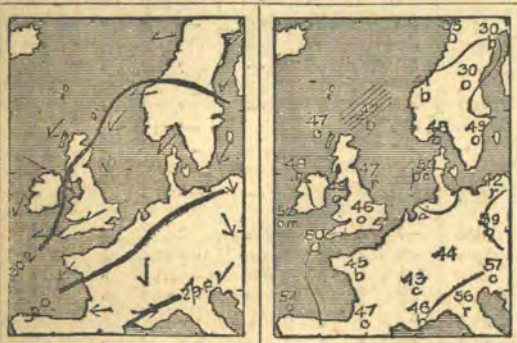
Barometer rising slightly in nearly all places. Area of high pressure over Ireland with low pressures over the Baltic and Gulf of Lyons. Pressure giving way in the W. later and readings becoming very uniform over us.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.







Weather during the 24 hours succeeding the date of the Charts.

Saturday, May 8.

Weather fine over the greater part of western Europe, but cloudy on our extreme western and northern coasts. Weather fine all day except in the extreme S.W.

Temperature fallen over France, risen elsewhere; readings still very uniform, ranging from 42° at Wick, to 53° at Cork and 52° at Toulon. Maxima between 50° and 60°.

Wind still northerly on both sides of the North Sea and over the E. of France, but southerly breezes shown on our S.W. coasts, and easterly winds over the W. of Scotland and W. of France. Easterly breezes on all our western coasts later.

Sea moderate to slight except off Christiansund.

Barometer falling on our W. and S.W. coasts and over Sweden, rising elsewhere. An area of high readings lying over Scotland and England, with a small depression off our S.W. coasts, and larger disturbances over the Baltic and the S.E. of France. Pressure increasing all day.

Sunday, May 9.

Weather fine except on our northern coasts and over Scandinavia, where sky cloudy. Rain falling in Hebrides later, and sky clouding over at our inland stations during day.

Temperature risen in most places; low over England for the season, ranging from 45° at London and Nairn to 53° at Valentia. Maxima exceeding 60° over southern Ireland, but between 50° and 55° in most other places.

Wind northerly on most of our coasts and over the North Sea, but drawing into N.E. and E. over the Channel and France. Moderate or light generally but fresh over Bay of Biscay. No change later.

Sea moderate to slight.

Barometer rising everywhere—briskly over Scandinavia. Area of high pressure lying over Ireland, with depressions near Toulon and Wisby. Rather brisk fall occurring over Norway later and spreading to all our coasts.

Monday, May 10.

Weather fine over France and the Channel and in a few other places, but cloudy or dull generally, with rain over central and northern England. Cloudy most of the day and slight rain generally.

Temperature changes slight and irregular. Readings uniform, ranging from 44° at Spurn Head to 52° at Valentia. Thermometer low all day—particularly in the E. and S.E.

Wind northerly on nearly all our coasts, and north-easterly and easterly over France, light or moderate at most of our stations but fresh over Bay of Biscay. Northerly breezes prevailing steadily during day.

Sea rough near the Shetlands.

Barometer rising over Scandinavia, falling elsewhere. Readings high over our western and northern coasts and over the N. of Norway and Sweden, with a slight depression over the North Sea, and a larger one over the Gulf of Lyons. Pressure giving way all day except in the N.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	52	34	42·9	−3·1	4	0·15	−0·20	•	•
	Stornoway	59	37	45·8	−1·5	3	0·20	−0·26	37	33
	Wick	55	31	44·4	−3·2	3	0·16	−0·14	•	•
CHANNEL ISLANDS	Scilly (St. Mary's)	55	43	49·8	−5·2	1	0·06	−0·34	•	•
	Jersey (Noirmont)	54	41	48·1	−5·0	1	0·01	−0·40	40	38

The above observations made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	60	34	46·0	−2·5	2	0·17	−0·18	*	*
	Aberdeen	57	33	45·6	−3·5	3	0·12	−0·33	25	23
	Glenalmond	58	30	45·7	−4·0	0	—	?	*	*
	Leith	59	34	47·7	0·0	1	0·03	−0·34	*	*
2. ENGLAND, N.E.	Shields	50	36	44·0	−6·5	2	0·24	−0·15	*	*
	Durham	56	28	43·0	−7·6	2	0·28	−0·15	?	?
	York	60	32	46·2	−4·9	4	0·36	−0·04	29	27
	Spurn Head	53	41	45·9	−5·1	3	0·24	?	*	*
	Kelstern (Lincolnsh.) ⚓	54	33	44·0	−8·0	4	0·41	+0·09	34	32
3. ENGLAND, E.	Hillington ⚓	59	36	47·1	−5·9	5	0·45	−0·09	44	41
	Yarmouth	51	37	45·9	−5·1	5	0·40	−0·01	*	*
	Cambridge	59	33	46·5	−6·5	2	0·06	−0·31	33	31
	Rothamsted	56	36	45·0	−8·0	4	0·18	−0·23	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	60	32	46·1	−5·3	4	0·34	−0·03	*	*
	Nottingham	62	34	47·1	−5·4	3	0·34	−0·11	*	*
	Loughborough	62	34	46·4	−6·4	3	0·30	−0·12	*	*
	Leicester	58	36	45·7	−7·2	4	0·37	+0·02	?	?
	Birmingham (Oscott)	59	34	45·8	−6·9	1	0·02	−0·47	*	*
	Shrewsbury ⚓	59	31	46·4	−6·6	2	0·28	−0·16	*	*
	Churchstoke ⚓	58	31	45·3	−6·7	1	0·26	?	50	47
	Hereford ⚓	61	35	47·9	−5·7	1	0·17	−0·24	*	*
	Cirencester	60	31	46·7	−6·7	1	0·12	−0·34	44	41
	Oxford	59	35	48·5	−5·0	1	0·10	−0·30	30	28
5. ENGLAND, S.	London	58	36	47·7	−5·5	2	0·02	−0·38	16	15
	Marlborough ⚓	60	33	47·6	−5·9	1	0·07	−0·41	*	*
	Strathfield Turgiss ⚓	61	33	48·3	−5·1	3	0·13	−0·27	*	*
	Dover	58	40	48·0	−4·1	4	0·11	−0·30	*	*
	Hastings (St. Leonard's)	61	38	48·1	−4·9	2	0·04	−0·36	*	*
	Southampton	62	35	49·6	−3·8	0	—	?	44	42
	Hurst Castle	58	37	48·8	−4·4	0	—	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	57	33	45·7	−3·5	0	—	?	*	*
	Glasgow	62	36	48·9	−1·4	1	0·15	−0·40	45	41
	Ardrossan	58	37	48·2	−1·9	1	0·06	−0·44	*	*
	Silloth (Cumberland)	61	32	47·9	−2·4	2	0·07	−0·33	41	38
	Douglas (Isle of Man)	56	33	49·4	−1·6	0	—	−0·40	66	61
7. ENGLAND, N.W.	Barrow-in-Furness†	61	37	44·3	−7·2	1	0·03	?	*	*
	Stonyhurst	59	33	46·8	−4·8	2	0·14	−0·39	48	44
	Blackpool ⚓	57	33	45·1	−7·5	2	0·05	−0·31	*	*
	Manchester	66	34	46·5	−5·8	1	0·06	−0·35	*	*
	Liverpool Obsy (Bidston)	58	38	48·2	−4·2	2	0·12	−0·19	*	*
	Llandudno ⚓	54	39	47·8	−5·2	1	0·02	?	59	55
	Holyhead	54	43	48·5	−3·5	0	—	−0·34	*	*
8. ENGLAND, S.W.	Pembroke	57	40	49·0	−4·7	1	0·10	−0·38	69	65
	Barnstaple	66	38	54·5	+0·6	1	0·13	−0·33	*	*
	Falmouth	59	42	49·6	−5·0	1	0·15	−0·41	62	60
	Plymouth	64	39	51·3	−2·2	0	—	−0·47	*	*
	Prawle Point	63	39	48·7	−5·1	1	0·01	?	*	*
9. IRELAND, N.	Londonderry	61	30	47·0	−3·7	3	0·13	−0·33	*	*
	Mullaghmore	60	40	50·0	−1·0	3	0·07	?	*	*
	Markree Castle	59	31	46·7	−4·4	2	0·04	−0·49	49	45
	Brookeborough	64	30	46·3	−4·5	0	—	?	*	*
	Armagh	59	34	47·0	−4·2	1	0·02	−0·37	59	55
	Donaghadee	55	36	48·0	−3·0	1	0·05	?	*	*
10. IRELAND, S.	Dublin	57	39	48·6	−3·4	1	0·15	−0·35	50	47
	Parsonstown	63	32	47·6	−3·8	1	0·07	−0·43	43	40
	Roche's Point	63	40	51·9	−0·7	1	0·01	−0·69	*	*
	Valentia	62	40	50·6	−2·1	2	0·19	−0·51	62	58
	Foynes	62	38	48·6	−3·4	2	0·12	?	*	*

Stations marked ⚓ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† Barrow-in-Furness has now been added to the list of stations.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 20.] WEEK ENDING MONDAY, MAY 17, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positons of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	61	35	47	3 below.	1	less than ½	4 less.	56	50
	2. ENGLAND, N.E.	62	31	48	5 below.	1	1	3 less.	47	43
	3. ENGLAND, E.	71	38	51	3 below.	1	less than ½	4 less.	68	63
	4. MID. COUNTIES	70	33	51	3 below.	1	1	3 less.	57	53
	5. ENGLAND, S.	78	39	54	0 (average).	1	1	4 less.	65	60
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	64	38	50	2 below.	1	less than ½	4 less.	67	61
	7. ENGLAND, N.W.	69	34	51	2 below.	1	less than ½	4 less.	78	71
	8. ENGLAND, S.W.	72	42	55	1 below.	1	less than ½	5 less.	70	65
	9. IRELAND, N.	68	35	50	2 below.	1	1	2 less.	53	49
	10. IRELAND, S.	72	38	53	0 (average).	1	2	4 less.	54	49

General Remarks.

Weather has again been generally clear and very dry in all parts of the kingdom; in Ireland, however, the sky was cloudy or overcast at the commencement of the period. A thunderstorm occurred at Loughborough on the 11th and a second in some parts of southern England on the 15th.

Temperature has been several degrees higher than during the week ending on the 10th. It was equal to the mean, for the corresponding period in the 13 years 1857-69, in "England, S.," and "Ireland, S.," but below it in all other districts. On the 14th and 15th the thermometer was much higher than at any other time during the period, and in the S. of England very high readings were registered,—the maxima being 78° at Southampton and 75° at Hastings and in London. The nights were rather sharp, and some slight frosts were experienced at some inland stations.

Rainfall scarcely measureable in any district; the largest amount was two tenths in "Ireland, S."

Bright sunshine shows a marked increase over Great Britain, but scarcely any alteration in Ireland. The number of hours registered was greatest in "England, N.W.," least in "England, N.E.," and over Ireland.

Wind between N.E. and E. all over the country. In force it was light in the N. but generally fresh or strong elsewhere, and at the close of the period blew with the force of a fresh gale on our southern coasts and in the channel.

Q 1522. 100.—5/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending May 17, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, May 11.

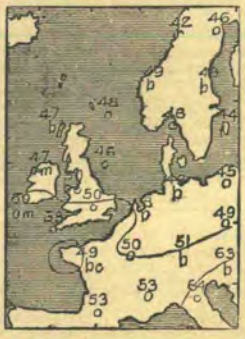
Weather fine over the North of France, N. Germany, and the N. of Scotland, cloudy or dull elsewhere. Sky clearing considerably later, and weather fine and bright, except in the W.

Temperature risen over France and the E. of England, fallen in most other places; readings low, ranging from 51° at Valentia to 45° at Oxford, and 47° in Scotland. Maxima between 50° and 55° generally, but 60° in London.

Wind easterly to north-easterly all over western Europe, blowing moderately in the E., but freshly in the W. No change in direction during day, but force increasing a little in West.

Sea rough off Valentia and Stornoway.

Barometer rising briskly over Scandinavia, falling elsewhere,—quickly over Bay of Biscay and our S.W. coasts. Readings highest in Lapland, lowest in S.W. France. Pressure decreasing all day in W., increasing slowly in East.



Wednesday, May 12.

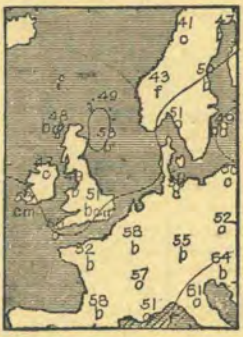
Weather fine over the N. of France, the S. and S.E. of England, N. Germany, and the N. of Scotland, cloudy or dull elsewhere. Weather fine and bright in nearly all places all day, and scarcely any rain falling.

Temperature risen slightly in most places except the N.E. of France; readings ranging from 53° at Scilly to 46° in the N.E. of England. Maxima rather higher than on previous day generally, but still 60° in London.

Wind shifted to S.W. in the N. of Scandinavia, but still north-easterly to easterly elsewhere, blowing rather freshly or strongly on most coasts. Moderate to fresh easterly winds all day.

Sea rough at some eastern ports as well as at Scilly and Stornoway.

Barometer rising a little in all parts of western Europe. Large area of high pressure to the northward of Scotland and over Scandinavia, with depression over the Bay of Biscay. Pressure increasing all day.



Thursday, May 13.

Weather cloudy or dull at some inland stations and over Norway and Denmark, fine and bright in nearly all other places. Weather very fine all day and no rain falling.

Temperature fallen slightly in W. Norway and on our S.W. coasts, risen a little elsewhere. Readings still uniform, ranging from 53° at Valentia to 47° at York. Maximum in London 68°.

Wind variable over France, but still north-easterly to easterly generally; light or moderate on most coasts, but blowing freshly in the S.W. No change later.

Sea moderate to slight.

Barometer rising very generally. Large area of high pressure over the N. of Scandinavia, with large shallow depression over France. Slight decrease in most places later, but changes very small.

Friday, May 14.

Weather dull over Ireland and the central parts of England, fine in most other places. Fine all day in the E. and N., dull and misty in the S.W. Scarcely any rain falling within our area.

Temperature fallen a little on our N.E. coasts, risen elsewhere. Readings ranging from about 48° on our N.E. coasts to 56° at Valentia. Maxima between 55° and 65° generally, but exceeding 70° in London and at Cambridge.

Wind easterly and north-easterly in nearly all parts of western Europe, blowing lightly on our E. coasts and freshly or strongly in the W. No change of importance later.

Sea rough round our S.W. coasts.

Barometer falling a little on our S.W. coasts, but showing scarcely any change elsewhere. Large area of high readings still shown in N., with large depression in S. Pressure giving way slowly all day.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, May 15.

Weather again cloudy or dull at several south-western and inland stations, but fine generally. Fine all day in most places, but cloudy with some rain in the extreme W. and N.

Temperature risen in most places; readings ranging from 46° at Leith to 60° at Valentia. Maxima again between 55° and 65° at most stations, but 75° in London and 72° at Valentia.

Wind northerly and north-easterly over the North Sea and our E. coast, easterly in the W. and S. Blowing freshly in the W. Moderate to fresh from the eastward all day.

Sea rough off the Hebrides, the mouth of the Humber, and Ushant.

Barometer rising a little at most of our stations, but falling on the Continent generally—most over Scandinavia. Changes very slight all day, but pressure giving way in most places.

Sunday, May 16.

Weather cloudy or dull at most of our northern and central stations but very fine on our S. and W. coasts and over France. Sky clearing later and very fine weather experienced generally during day.

Temperature fallen a little in most districts, but especially in the N.W. and W. and over Scandinavia. Readings ranging from 44° in the Shetlands to 60° at Valentia. Maxima lower than on preceding days.

Wind north-easterly to easterly over our area, light or moderate in force generally, but blowing strongly over Norway, Sweden, and the Channel. North-easterly to easterly winds continuing all day.

Sea rough in the Channel.

Barometer falling slowly in N.E., rising a little elsewhere. Area of high pressure over Scotland, with depressions over the Baltic and Bay of Biscay. No change during day.

Monday, May 17.

Weather very fine over the northern and western parts of the kingdom and in most parts of the continent, cloudy or dull in the central and eastern districts. Weather very fine all day.

Temperature risen a little in the N.W. and N., fallen slightly elsewhere. Readings ranging from 46° in the S.E. to 59° at Valentia. Maxima 68° at Valentia, between 55° and 65° generally.

Wind northerly to north-easterly on our E. coasts, easterly at our southern and western stations and over France. Blowing strongly to a gale over the Channel and N. and W. of France. Strong easterly winds holding in the S. all day.

Sea rough in the Channel and off the Hebrides.

Barometer rising a little except in the S. of France. Area of high pressure over our northern districts with depressions over the Baltic and Bay of Biscay. Distribution unchanged later.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⇛ = a heavy gale; ⇒ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	56	39	46·5	−0·4	1	0·05	−0·25	*	*
	Stornoway	53	39	46·1	−2·2	0	—	−0·56	87	76
	Wick	59	34	46·5	−2·5	1	0·01	−0·26	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	63	45	52·8	−3·2	3	0·08	−0·18	*	*
	Jersey (Noirmont)	65	43	53·5	−1·0	1	0·01	−0·40	64	61

The above observations made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	59	36	48·0	−1·4	0	—	−0·36	*	*
	Aberdeen	56	35	48·2	−2·3	0	—	−0·53	68	60
	Glenalmond	61	35	46·2	−4·5	0	—	?	44	39
	Leith	57	36	46·3	−4·5	2	0·04	−0·33	*	*
2. ENGLAND, N.E.	Shields	55	38	47·3	−4·2	2	0·06	−0·34	*	*
	Durham	59	31	46·2	−5·5	1	0·14	−0·27	40	36
	York	62	34	49·1	−3·2	1	0·01	−0·39	49	45
	Spurn Head	53	42	48·0	−4·2	1	0·01	?	*	*
	Kelstern (Lincolnsh.) ⁂	54	39	47·0	−6·0	1	0·09	−0·22	52	48
3. ENGLAND, E.	Hillington ⁂	63	42	50·6	−3·2	1	0·08	−0·31	69	63
	Yarmouth	55	43	48·8	−4·3	0	—	−0·40	*	*
	Cambridge	71	38	52·0	−2·2	1	0·06	−0·32	67	62
	Rothamsted	69	40	51·2	−3·0	0	†0·01	−0·40	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	61	33	49·1	−3·8	1	0·30	−0·08	*	*
	Nottingham	65	38	51·2	−2·3	1	0·13	−0·34	*	*
	Loughborough	62	39	51·5	−2·5	1	0·14	−0·32	*	*
	Leicester	63	39	50·6	−3·7	1	0·41	+0·01	?	?
	Birmingham (Oscott)	63	38	50·2	−3·7	1	0·16	−0·35	*	*
	Shrewsbury ⁂								*	*
	Churchstoke ⁂	62	37	49·7	−4·8	0	—	?	50	48
	Hereford ⁂	66	38	51·3	−3·2	1	0·06	−0·36	*	*
	Cirencester	70	38	52·0	−2·6	1	0·01	−0·47	59	55
	Oxford	67	36	51·3	−3·4	1	0·07	−0·33	62	57
5. ENGLAND, S.	London	75	42	55·4	+1·0	1	0·01	−0·39	62	58
	Marlborough ⁂	71	39	52·4	−2·1	0	—	−0·48	*	*
	Strathfield Turgiss ⁂	74	40	54·2	−0·3	1	0·23	−0·12	*	*
	Dover	64	44	52·3	−1·0	0	—	−0·45	*	*
	Hastings (St. Leonard's)	75	41	55·3	+1·5	0	—	−0·38	*	*
	Southampton	78	41	56·6	+2·3	2	0·13	?	67	62
	Hurst Castle	63	44	53·5	−0·7	2	0·16	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	60	39	49·6	−0·6	0	—	?	*	*
	Glasgow	62	40	48·1	−3·3	0	—	−0·56	49	44
	Ardrossan	61	40	49·6	−1·7	1	0·06	−0·44	*	*
	Silloth (Cumberland)	64	38	49·5	−2·2	1	0·04	−0·36	73	66
	Douglas (Isle of Man)	62	43	50·9	−1·2	0	—	−0·39	80	73
7. ENGLAND, N.W.	Barrow-in-Furness	69	40	52·9	+0·1	0	—	?	*	*
	Stonyhurst	63	38	49·9	−2·8	0	—	−0·55	83	75
	Blackpool ⁂	66	34	50·2	−2·6	0	—	−0·39	*	*
	Manchester	61	39	49·6	−3·9	1	0·04	−0·36	*	*
	Liverpool Obsy (Bidston)	64	39	51·4	−2·1	1	0·04	−0·27	*	*
	Llandudno ⁂	62	40	50·1	−3·9	1	0·05	?	73	67
	Holyhead	63	45	53·0	0·0	0	—	−0·35	*	*
8. ENGLAND, S.W.	Pembroke	65	43	52·9	−1·7	1	0·01	−0·47	72	67
	Barnstaple	70	46	57·8	+2·8	0	—	−0·46	*	*
	Falmouth	67	45	54·3	−1·5	2	0·02	−0·55	67	63
	Plymouth	72	42	56·4	+1·4	0	—	−0·45	*	*
	Prawle Point	67	42	52·1	−2·8	1	0·01	?	*	*
9. IRELAND, N.	Londonderry	67	35	50·0	−2·0	1	0·09	−0·35	*	*
	Mullaghmore	65	41	50·8	−1·4	1	0·04	?	*	*
	Markree Castle	67	38	51·2	−1·0	1	0·19	−0·37	47	43
	Brookeborough	68	36	50·8	−0·9	0	—	?	*	*
	Armagh	62	39	49·5	−2·9	1	0·02	−0·33	59	54
	Donaghadee	61	42	50·2	−2·0	1	0·12	?	*	*
10. IRELAND, S.	Dublin	59	45	51·4	−1·4	1	0·03	−0·47	67	61
	Parsonstown	66	38	51·6	−0·9	1	0·09	−0·45	56	51
	Roche's Point	64	45	53·9	+0·4	1	0·29	−0·42	*	*
	Valentia	72	45	55·8	+2·3	2	0·36	−0·29	39	36
	Foynes	68	39	50·7	−2·3	1	0·12	?	*	*

Stations marked ⁂ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received. † Dew.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

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[*Annual subscription, post paid, 12s. 6d.*

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The black dots show the positons of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.)				Rainfall. (Amounts in tenths of an inch.)			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	76	33	55	3 above.	4	3	1 less.	47	41
	2. ENGLAND, N.E.	70	34	53	0 (average).	2	1	3 less.	41	36
	3. ENGLAND, E.	74	30	53	3 below.	1	1	4 less.	36	32
	4. MID. COUNTIES	74	32	54	1 below.	2	1	3 less.	42	38
	5. ENGLAND, S.	77	32	54	1 below.	1	less than ½	4 less.	40	36
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	73	38	53	1 below.	4	7	1 more.	37	33
	7. ENGLAND, N.W.	67	36	53	3 below.	1	3	1 less.	42	37
	8. ENGLAND, S.W.	78	42	56	0 (average).	1	less than ½	5 less.	53	48
	9. IRELAND, N.	69	39	54	0 (average).	4	5	0 (average).	42	37
	10. IRELAND, S.	72	39	56	1 above.	2	2	4 less.	52	47

General Remarks.

Weather was fine and moderately clear during the first two days, but quickly became less settled, and from the 22nd till the close of the period the sky was overcast or cloudy in all parts of the kingdom, with rain in several places, especially in the N. and N.W.

Temperature was a little above the mean in "Scotland, E.," and "Ireland, S.," and equal to the mean in "Ireland, N.," "England, S.W.," and "England, N.E.," but slightly below it in all other districts. The highest of the maxima (77° at Southampton and 78° at Prawle Point) occurred on the 20th or 21st. At the commencement of the period the nights were rather cold, and in the central and eastern counties of England one or two slight frosts were registered.

Rainfall a little more than the mean in "Scotland, W.," and equal to the mean in "Ireland, N.," but in all other districts the fall was very slight.

Bright sunshine shows a decided decrease in all parts of the country, but was more prevalent in the S.W. of England and S. of Ireland than elsewhere. The amounts recorded vary from 36 hours in "England, E.," to 53 hours in "England, S.W."

Wind on the 18th was easterly in nearly all parts of the country, but a southerly to south-westerly breeze had appeared at our more northern stations and gradually spread to all our coasts. In force the wind was light or moderate during the first few days; from the 22nd till the end of the period, however, it blew freshly or strongly generally, and occasionally reached the force of a gale at some of our north-western stations.

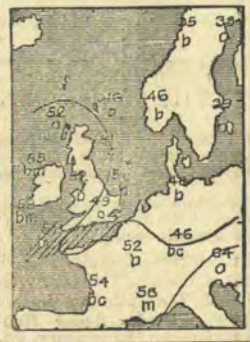
Q 1590. 100.—5/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending May 24, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.



Weather during the 24 hours succeeding the date of the Charts.

Tuesday, May 18.

Weather fine over the greater part of western Europe, but dull in the N. of Scotland and rainy and misty in the S. of France. Rain setting in at Stornoway later, but weather generally fine all day.

Temperature risen over these Islands, fallen on the Continent. Readings low E., ranging from 59° at Valentia to 47° at Yarmouth. Maxima between 55° and 65°, but reaching 68° at Leith and Roche's Point.

Wind northerly to the eastward of the North Sea, north-easterly over the greater part of these Islands and France, but southerly in the extreme N. of Scotland. Blowing a gale over the Bay of Biscay, but light or moderate on our coasts. Southerly wind spreading later.

Sea rough in the S. and S.W.

Barometer falling a little in N.W., rising elsewhere. Narrow band of high pressure lying over these Islands and spreading northward to the N. of Norway, low pressure over S. France. Pressure giving way everywhere during day.

Wednesday, May 19.

Weather fine over France, the Netherlands, the S. and S.E. of England, and the S. of Ireland, dull elsewhere, with rain in N.E. Sky clearing in N.W. and N.E. later but overcast in S.

Temperature fallen over France, risen in most other places. Readings still low East, ranging from 59° in S. Ireland to 48° at Yarmouth. Maxima higher generally than on previous day, reaching 73° at Wick and 71° at Leith.

Wind westerly to north-westerly in the N., variable between N. and N.E. in the S. and W. and easterly over France. Moderate on our coasts but blowing a gale over the Bay of Biscay. North-westerly and northerly breezes all over the country during day.

Sea moderate to smooth.

Barometer rising over France but falling elsewhere—briskly on our northern coasts and over Scandinavia. Area of high pressure over Ireland with low pressures near Toulon and Christiansund. Small depression passing southward along our east coast later.

Thursday, May 20.

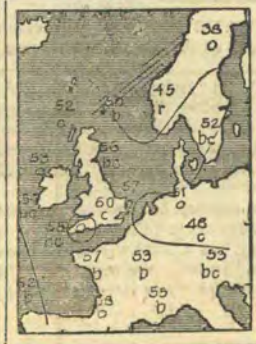
Weather dull at some eastern, northern, and north-western stations, and dull and rainy in the countries to the eastward of the North Sea; fine in most other places. Fine all day except in extreme N.

Temperature risen generally—especially in south-eastern and central England. Readings ranging from 67° at Prawle Point and 63° at Valentia to 50° in the Shetlands. Maxima exceeding 70° at several stations.

Wind north-westerly to northerly all over these Islands and France, but westerly to south-westerly over the greater part of Scandinavia and easterly at Bodö. Blowing strongly in N. Scotland and reaching a gale at Christiansund. Wind backing to S. in the N. later.

Sea rough off the Shetlands and Christiansund,

Barometer falling briskly Scandinavia, rising elsewhere. Area of high pressure over Ireland, with large depression near Christiansund. Barometer falling slightly at Stornoway later—still rising elsewhere.



Friday, May 21.

Weather fine over France and the greater part of these Islands, but dull on our N.W. coasts and rainy in Norway. Fine in the S. all day, but dull and unsettled in the N.

Temperature fallen at most of our stations, changed irregularly on the Continent. Readings ranging from 70° at Prawle Point to 50° at Sumburgh Head. Maxima again exceeding 70° over south-eastern and central England.

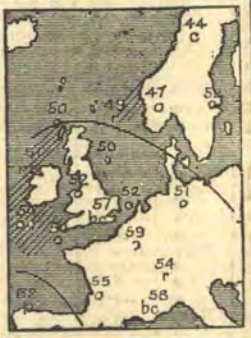
Wind north-westerly to northerly over these Islands, France, and the North Sea, south-westerly and southerly over Norway and Sweden. Moderate in force in most places. Wind backing in W. and N. in evening and increasing to a gale at Christiansund.

Sea rough off the Shetlands and Christiansund.

Barometer rising in France, falling in nearly all other places. Readings still highest off the S. of Ireland, with a depression near Christiansund. Pressure giving way all day, most in N.W.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.



Weather during the 24 hours succeeding the date of the Charts.

Saturday, May 22.

Weather fine over France and on our S. coast, dull in most other places. Sky remaining cloudy or overcast generally all day. Rain in the N.

Temperature fallen a little generally; readings ranging from 62° in London to 45° in the Shetlands. Maxima between 65° and 55° in most places.

Wind north-westerly to westerly over these Islands and France, south-westerly in Holland, and south-easterly at Skudesnaes. Fresh to a gale on our N.W. and N.E. coasts, moderate elsewhere. Wind veering towards N. later.

Sea rough off Christiansund.

Barometer falling briskly except in the S. of France. Area of high pressure off the N. coast of Spain, with large disturbance near Bodö, and smaller depressions over the Baltic and the North Sea. Barometer recovering in W. and N. later.

Sunday, May 23.

Weather fine in the N. of France and S. of England, dull and rainy in most other districts. Cloudy and unsettled all day, but finer in the S.E. than elsewhere.

Temperature fallen a little generally; readings ranging from 58° at Dover to 49° at Sumburgh Head. Maximum 73° at Oxford, but highest readings generally between 55° and 65°.

Wind south-westerly over these Islands and Scandinavia, westerly to north-westerly over France; fresh to strong at some of our western stations, and blowing a gale at Christiansund. Strong westerly to south-westerly wind all day.

Sea rough round our W. and S.W. coasts.

Barometer rising at our eastern stations and over France, falling in the W. and over Scandinavia. Area of high pressure over Bay of Biscay, with depression near Christiansund. Pressure giving way all day.

Monday, May 24.

Weather fine in the S. of France and on our N.W. and N.E. coasts, dull and cloudy elsewhere, with fog and rain in Norway. Weather fine in the N.E. all day, but dull and unsettled generally.

Temperature fallen on our western coasts, risen slightly in most other places; readings ranging from 58° in the S.E. and S.W., to 44° at Stornoway. Maxima between 55° and 65°.

Wind westerly to south-westerly on most of our coasts and over the North Sea, but southerly in Sweden and easterly in the S. of France. Strong in force generally, and blowing a fresh gale in the N.W. and N.E. all day.

Sea rough to high except at some north-eastern stations.

Barometer rising in the W. of Ireland, falling in all other places. Anticyclone over France, with large depression near Christiansund. Rather steep gradients over us. Brisk recovery taking place generally later.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	54	35	47·4	−0·6	6	1·13	+0·83	*	*
	Stornoway	59	41	51·5	+2·8	6	0·79	+0·21	24	20
	Wick	73	37	50·1	−0·1	7	0·66	+0·40	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	61	48	54·7	−2·3	0	—	−0·29	*	*
	Jersey (Noirmont)	66	43	53·8	−1·8	0	—	−0·40	73	68

The above observations made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	68	42	54·3	+3·8	5	0 41	+0·02	*	*
	Aberdeen	68	37	54·3	+2·6	4	0·15	−0·29	47	41
	Glenalmond	73	33	54·0	+2·0	4	0·23	?	?	?
	Leith	76	39	56·4	+4·4	4	0·36	−0·13	*	*
2. ENGLAND, N.E.	Shields	65	40	53·6	+0·6	5	0·16	−0·24	*	*
	Durham	69	36	53·1	+0·5	2	0·19	−0·22	41	36
	York	68	36	54·2	+0·5	1	0·02	−0·38	42	37
	Spurn Head	64	42	52·2	−1·3	2	0·06	?	*	*
	Kelstern (Lincolnsh.) ℳ	70	34	51·6	−2·4	2	0·09	−0·26	40	36
3. ENGLAND, E.	Hillington ℳ	71	31	51·9	−3·9	2	0·36	−0·23	33	29
	Yarmouth	65	40	51·9	−2·8	1	0·11	−0·31	*	*
	Cambridge	74	30	53·0	−2·6	1	0·01	−0·47	38	34
	Rothamsted	73	31	53·0	−2·6	1	0·02	−0·43	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	72	41	54·6	+0·6	1	0·10	−0·30	*	*
	Nottingham	72	38	55·0	+0·2	3	0·24	−0·26	*	*
	Loughborough	69	37	54·6	−0·7	2	0·12	−0·38	*	*
	Leicester	68	37	53·7	−1·8	3	0·07	−0·41	?	?
	Birmingham (Oscott)	68	36	53·3	−2·0	3	0·11	−0·43	*	*
	Shrewsbury ℳ								*	*
	Churchstoke ℳ	67	32	52·8	−3·7	0	—	?	38	34
	Hereford ℳ	71	38	55·1	−0·5	0	—	−0·44	*	*
	Cirencester	74	33	54·1	−1·8	1	0·01	−0·49	45	41
	Oxford	73	38	55·4	−0·1	2	0·03	−0·37	?	?
5. ENGLAND, S.	London	76	35	55·3	−0·3	0	—	−0·41	26	24
	Marlborough ℳ	75	35	54·7	−1·1	1	0·02	−0·55	*	*
	Strathfield Turgiss ℳ	76	32	55·0	−0·8	1	0·02	−0·32	*	*
	Dover	63	43	53·4	−1·1	2	0·08	−0·37	*	*
	Hastings (St. Leonard's)	65	39	53·1	−1·8	1	0·01	−0·32	*	*
	Southampton	77	36	55·8	−0·5	0	—	?		
	Hurst Castle	67	40	53·6	−1·6	0	—	?	53	48
6. SCOTLAND, W.	Laudale (Loch Sunart)	61	42	51·4	−2·0	5	1·27	?	*	*
	Glasgow	69	44	54·0	−0·2	5	0·43	−0·13	41	36
	Ardrossan	62	46	52·6	−1·6	5	0·53	+0·03	*	*
	Silloth (Cumberland)	73	38	54·7	−0·2	3	0·69	+0·28	32	28
	Douglas (Isle of Man)	64	46	53·3	−1·7	2	0·56	+0·17	38	34
7. ENGLAND, N.W.	Barrow-in-Furness	62	41	53·3	−1·2	2	0·16	?	*	*
	Stonyhurst	67	39	52·0	−4·0	3	1·15	+0·69	44	39
	Blackpool ℳ	58	36	51·8	−3·2	1	0·18	−0·22	*	*
	Manchester	62	38	50·1	−6·6	1	0·32	−0·08	*	*
	Liverpool Obsr (Bidston)	60	42	53·2	−3·6	1	0·11	−0·24	*	*
	Llandudno ℳ	63	42	54·0	−1·5	1	0·09	?	39	35
	Holyhead	63	46	54·4	−1·4	1	0·04	−0·41	*	*
8. ENGLAND, S.W.	Pembroke	62	45	53·0	−2·9	2	0·02	−0·44	40	36
	Barnstaple	73	46	58·4	+2·4	1	0·03	−0·43	*	*
	Falmouth	64	46	55·8	−1·1	0	—	−0·59	65	60
	Plymouth	76	44	58·5	+2·3	1	0·03	−0·42	*	*
	Prawle Point	78	42	55·6	−0·4	0	—	?	*	*
9. IRELAND, N.	Londonderry	69	43	53·9	+0·3	4	0·49	+0·06	*	*
	Mullaghmore	61	46	53·3	+0·1	4	0·73	?	*	*
	Markree Castle	65	40	53·2	−0·3	4	0·39	−0·21	47	42
	Brookeborough	69	43	54·4	+1·4	4	0·54	?	*	*
	Armagh	69	39	54·1	+0·3	4	0·57	+0·24	36	32
	Donaghadee	63	43	53·4	0·0	2	0·25	?	*	*
10. IRELAND, S.	Dublin	69	43	56·7	+2·9	1	0·08	−0·40	48	43
	Parsonstown	72	39	54·3	+0·4	2	0·51	−0·03	53	47
	Roche's Point	70	46	58·3	+3·4	1	0·02	−0·68	*	*
	Valentia	65	46	55·7	+0·8	3	0·16	−0·46	55	50
	Foynes	67	40	53·0	−1·2	3	0·36	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 22.] WEEK ENDING MONDAY, MAY 31, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positons of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.)				Rainfall. (Amounts in tenths of an inch.)			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	64	34	51	2 below.	3	5	2 less.	48	41
	2. ENGLAND, N.E.	68	36	51	4 below.	4	9	6 more.	47	41
	3. ENGLAND, E.	82	34	55	2 below.	4	4	1 more.	41	37
	4. MID. COUNTIES	73	30	52	4 below.	5	13	7 more.	38	34
	5. ENGLAND, S.	86	33	55	2 below.	3	3	2 less.	51	46
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	61	37	51	3 below.	5	6	1 less.	37	32
	7. ENGLAND, N.W.	62	36	51	4 below.	5	15	11 more.	41	36
	8. ENGLAND, S.W.	71	39	54	4 below.	4	10	7 more.	42	38
	9. IRELAND, N.	63	35	51	4 below.	6	8	3 more.	46	40
	10. IRELAND, S.	64	37	53	3 below.	5	7	3 more.	41	37

General Remarks.

Weather during this period has been of a rather changeable character; on the 25th, 26th, 28th, and 29th the sky was moderately clear, but on the other days the weather was generally cloudy or dull. Thunderstorms, accompanied by heavy rain, occurred at some stations on the 26th and again on the 28th.

Temperature has varied very considerably, but has been on the whole a few degrees below the mean for the time of year in all districts. At the commencement of the period readings were rather high in all parts of the kingdom, and in London and at Cambridge 86° and 82° were recorded, respectively, on the 26th. During the last few days the thermometer stood much lower, and the nights were very cold, the lowest reading of all being 30° in the shade at Shrewsbury during the early morning of the 28th. On this occasion sharp ground frosts occurred in many parts of England.

Rainfall was less than the mean in "England, S.," and over Scotland, but more than the mean in all other districts; over the greater part of England the excess was rather large.

Bright sunshine shows a slight increase over southern and eastern England and in the N. of Ireland, but elsewhere a decrease is reported. The number of hours shows considerable uniformity in all parts of the kingdom, but was rather greater (51 hours) in "England, S.," and less (32 hours) in "Scotland, W.," than elsewhere.

Wind was generally south-westerly during the first two days, very variable on the 27th, westerly on the 28th, between S.W. and N.W. in most places on the 29th, and southerly to south-easterly on the 30th and 31st. In force it was generally moderate in the E. and S., but fresh in the W. and N., and on the 30th blew with the force of a gale at some of the most exposed stations on our western and northern coasts.

Q 1672. 100.—6/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending May 31, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, May 25.

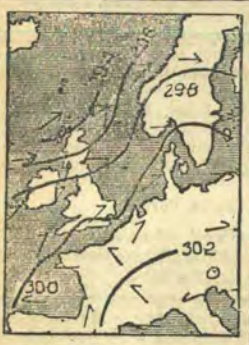
Weather fine at most of our northern and north-eastern stations, and in France and the Netherlands, cloudy or dull in most other places. Fine in the S.E. of England all day, dull elsewhere, with slight rain in W.

Temperature fallen a little in most places; readings ranging over these Islands from 60° in London to 45° at Wick. Maxima between 55° and 65° generally, but as high as 73° in London and at Cambridge.

Wind easterly over France, but south-westerly and westerly over these Islands and westerly over Scandinavia. Moderate in force on most coasts, but strong in N. Scotland and reaching a gale over Norway and Sweden. Wind backing to S. in the W. later.

Sea rough on our south-western and northern coasts.

Barometer rising briskly in most parts of the United Kingdom and countries to the eastward of the North Sea, but falling slowly in France and on our S.W. coasts. Anticyclone over France, with large depression over Lapland. Fresh depression appearing on our western coasts later.



Wednesday, May 26.

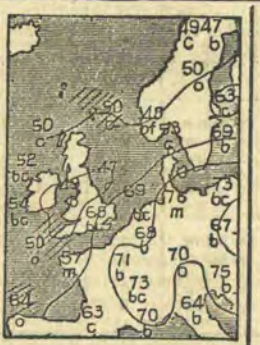
Weather fine at several stations in the E. of England as well as over the greater part of France, the Netherlands, and Sweden, cloudy and unsettled elsewhere. Weather fine all day in the S.E. and at Aberdeen.

Temperature risen generally; ranging from 69° in London to 49° in the Hebrides; rising quickly in the S.E. during the day and maximum of 86° recorded in London, and of 82° at Cambridge.

Wind easterly over France but south-westerly on all our coasts; blowing lightly or moderately in the S. and S.E., but reaching a fresh gale at Barrow-in-Furness and a moderate gale in Scotland. Wind veering to W. in the W. and N. later. Strong gale felt in the Hebrides.

Sea rough in the N.W. and N.

Barometer rising quickly in Scandinavia and slightly in France, with a slight recovery at Valentia, falling elsewhere. Pressure highest over France, with a large depression to the north-westward of Scotland. Depression travelling away northward, and barometer rising in N. and falling in S.



Thursday, May 27.

Weather fine at our extreme western, northern, and south-eastern stations, as well as over the Netherlands and E. of France, dull elsewhere, with heavy rain over the northern, central, and western districts of England.

Temperature fallen over these Islands and the W. of France, risen considerably over N. Germany and the Baltic; ranging from 73° at Lyons, 68° in London, and 63° at Stockholm, to 50° in the Hebrides. Maxima exceeding 70° in S.E., between 55° and 65° elsewhere.

Wind between W. and S. on the continent generally, and over the S.E. of England, and westerly at our western stations, but northerly on our other coasts. Moderate in force in most places, but fresh in the S.W.

Sea rough off the Scillys and Hebrides.

Barometer rising briskly in the N. and falling elsewhere. Area of high pressure over the Mediterranean, with large depression near Christiansund and smaller one over eastern England. Pressure increasing slowly all day.

Friday, May 28.

Weather fine in nearly all parts of these Islands and the W. of France, cloudy elsewhere, with rain at Flushing and Brussels. Rain falling on our N.W. coasts during the day, with thunderstorms in the S.E.

Temperature risen in the S.W., fallen elsewhere, very considerably in the S.E. of England and over the Netherlands. Readings uniform, ranging from 55° in the S.W. and S.E. to 48° at Nairn. Maxima lower than on 27th, between 53° and 65° generally.

Wind westerly all over these Islands, the North Sea, and the Channel, north-westerly in France, and south-westerly in Sweden. Moderate in force except in the W. Wind veering to W.N.W. later, and freshening a little.

Sea rough at Scilly and Mullaghmore.

Barometer rising over the whole of western Europe, but falling in Sweden. Large area of high pressure off our S.W. coasts and large depression over Sweden. Pressure increasing all day.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, May 29.

Weather exceedingly fine except in Scandinavia, the extreme N. of Scotland, and at Valentia. Sky clouding over in the W. later, with heavy rain in Ireland, but remaining nearly clear elsewhere.

Temperature fallen a little very generally—most in the N.E.—readings ranging from 57° at Dover to 42° in the Shetlands. Thermometer falling in the E. during the day, and maxima rather low.

Wind moderate south-south-easterly in the S. of Ireland and south-westerly in the N. of that country, westerly to north-westerly over Great Britain and the Channel, north-easterly in France, and south-westerly in Norway. Southerly wind in the W., extending during day, and increasing at Valentia.

Sea rough off the W. of Ireland.

Barometer rising at all stations except Toulon and Valentia. Large anticyclone over our south-western stations and the N.W. of France, with low pressures over the Gulf of Lyons and Lapland. Pressure decreasing briskly in the W. later.

Sunday, May 30.

Weather very fine over France, the Netherlands, and the S.E. of England, but dull and unsettled in the W., with rain in Ireland. Sky clear in extreme S.E. all day, but overcast with rain in the W.

Temperature risen slightly generally; readings ranging from 62° in London to 48° in the Shetlands. Maximum 69° at Nottingham, but between 55° and 65° elsewhere.

Wind easterly over France, and north-westerly in the countries to the eastward of the North Sea, but southerly over the whole of these Islands, blowing strongly in W. Ireland. Wind veering westward in Ireland later, but remaining southerly over Great Britain.

Sea rough in the W. and N.

Barometer risen quickly over Scandinavia, fallen elsewhere. Anticyclone lying over the Channel and N. of France, with large depression off our N.W. coasts. Pressure giving way all day.

Monday, May 31.

Weather fine over the greater part of the continent, on our extreme S.E. coasts, and in N. Scotland, dull and rainy in other parts of these Islands and in W. France. Fine on our N. and E. coasts all day, rainy elsewhere.

Temperature fallen over England, risen slightly in most other places; readings uniform, ranging over these Islands from 47° to 54°. Low all day, only exceeding 60° at Nairn, Oxford, and Cambridge.

Wind varying considerably, north-easterly over the Baltic and the Netherlands, and easterly in France, but westerly in Ireland, and southerly in England and Scotland. Blowing freshly in the N.E. of England, but light generally. Easterly and south-easterly breezes appearing later.

Sea rough round the Shetlands.

Barometer rising slowly over Scandinavia and the N. of these Islands, falling elsewhere,—quickly over France. High pressure over the Baltic, with depressions over our western coasts and the Gulf of Lyons. Barometer rising in the N., and falling in the S. later.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⋙ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	54	39	47·5	−1·5	4	0·28	−0·01	*	*
	Stornoway	58	38	48·2	−2·5	5	0·57	−0·04	120	56
	Wick	59	37	49·9	−1·6	3	0·61	+0·35	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	62	48	54·1	−3·8	5	1·62	+1·30	*	*
	Jersey (Noirmont)	77	45	56·8	−0·2	4	0·38	−0·02	109	67

The above observations made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	64	40	52·9	+1·0	2	0·09	−0·30	*	*
	Aberdeen	64	40	51·5	−1·5	2	0·56	+0·12	52	44
	Glenalmond	59	34	48·4	−4·8	3	1·10	?	44	38
	Leith	62	40	52·2	−1·1	3	0·05	−0·34	*	*
2. ENGLAND, N.E.	Shields	64	40	51·0	−3·6	3	0·77	+0·37	*	*
	Durham	65	36	49·8	−4·2	3	0·89	+0·48	53	46
	York	66	40	52·3	−2·9	4	1·72	+1·31	46	40
	Spurn Head	66	45	52·3	−2·7	4	0·55	?	*	*
	Kelstern (Lincolnsh.) ℳ	68	38	51·2	−4·4	4	0·61	+0·24	41	36
3. ENGLAND, E.	Hillington ℳ	75	37	53·6	−3·4	4	0·73	+0·44	42	37
	Yarmouth	75	40	54·9	−1·2	3	0·26	−0·19	*	*
	Cambridge	82	38	56·7	−0·3	3	0·24	−0·15	40	36
	Rothamsted	79	34	54·0	−3·3	5	0·53	+0·08	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	68	35	52·2	−3·3	5	1·48	+1·03	*	*
	Nottingham	73	37	53·8	−2·2	4	1·05	+0·55	*	*
	Loughborough	71	37	53·3	−3·5	5	0·70	+0·17	*	*
	Leicester	69	38	53·5	−3·5	6	0·77	+0·27	?	?
	Birmingham (Oscott)	69	38	52·1	−4·8	5	1·19	+0·64	*	*
	Shrewsbury ℳ	66	30	49·7	−7·2	6	2·42	+2·01	*	*
	Churchstoke ℳ	62	35	49·7	−7·3	5	2·37	?	34	30
	Hereford ℳ	70	36	52·5	−4·4	5	1·88	+1·46	*	*
	Cirencester	70	35	52·4	−4·8	5	0·65	+0·15	41	37
	Oxford	71	41	54·9	−3·4	4	0·63	+0·23	?	?
5. ENGLAND, S.	London	86	40	57·7	+0·7	2	0·24	−0·21	49	44
	Marlborough ℳ	71	35	53·2	−4·1	4	0·45	−0·02	*	*
	Strathfield Turgiss ℳ	79	33	54·1	−2·9	4	0·27	−0·08	*	*
	Dover	67	44	55·5	−0·3	2	0·29	−0·17	*	*
	Hastings (St. Leonard's)	74	45	56·0	0·0	1	0·02	−0·31	*	*
	Southampton	72	39	54·8	−2·5	4	0·25	?	52	47
	Hurst Castle	63	43	53·8	−2·6	4	0·27	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	61	37	49·4	−3·4	6	1·60	?	*	*
	Glasgow	59	40	50·9	−2·9	4	0·32	−0·28	34	29
	Ardrossan	57	44	51·1	−2·7	5	0·46	−0·05	*	*
	Silloth (Cumberland)	61	37	51·9	−2·1	5	0·38	−0·03	40	34
	Douglas (Isle of Man)	58	41	49·9	−4·5	4	0·27	−0·12	38	33
7. ENGLAND, N.W.	Barrow-in-Furness	59	38	50·8	−4·5	5	1·07	?	*	*
	Stonyhurst	60	37	50·1	−5·2	5	1·56	+0·96	46	40
	Blackpool ℳ	59	36	51·5	−3·9	5	1·34	+0·93	*	*
	Manchester	60	39	49·3	−6·9	5	2·01	+1·59	*	*
	Liverpool Obsy (Bidston)	62	45	52·1	−3·9	4	1·81	+1·41	*	*
	Llandudno ℳ	60	44	51·9	−3·9	4	1·46	?	36	32
	Holyhead	59	47	52·5	−2·5	4	0·87	+0·51	*	*
8. ENGLAND, S.W.	Pembroke	64	46	51·4	−5·3	4	1·57	+1·15	39	35
	Barnstaple	71	39	56·4	−0·9	4	1·40	+0·95	*	*
	Falmouth	63	46	53·3	−4·7	4	1·00	+0·41	45	41
	Plymouth	66	40	53·8	−3·7	4	0·77	+0·35	*	*
	Prawle Point	68	44	52·8	−4·9	4	0·40	?	*	*
9. IRELAND, N.	Londonderry	63	41	51·4	−3·1	6	0·77	+0·31	*	*
	Mullaghmore	61	43	52·1	−2·4	6	0·68	?	*	*
	Markree Castle	61	35	50·9	−4·1	6	1·10	+0·45	43	37
	Brookeborough	61	37	51·1	−3·6	6	0·70	?	*	*
	Armagh	61	40	51·2	−3·8	7	0·38	+0·05	48	42
	Donaghadee	61	39	50·8	−3·8	5	1·12	?	*	*
10. IRELAND, S.	Dublin	64	42	53·3	−1·7	6	0·59	+0·11	39	35
	Parsonstown	62	37	51·5	−3·7	6	0·49	−0·04	37	33
	Roche's Point	63	43	54·7	−1·3	5	1·07	+0·39	*	*
	Valentia	60	43	52·8	−3·2	5	1·15	+0·53	47	42
	Foynes	64	40	50·6	−4·9	5	0·42	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 23.] WEEK ENDING MONDAY, JUNE 7, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positons of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	69	37	51	3 below.	4	4	1 more.	68	57
	2. ENGLAND, N.E.	66	36	51	5 below.	6	6	2 more.	36	31
	3. ENGLAND, E.	64	36	52	6 below.	7	9	5 more.	27	23
	4. MID. COUNTIES	64	34	52	6 below.	6	7	3 more.	26	23
	5. ENGLAND, S.	67	35	54	4 below.	6	5	2 more.	26	33
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	71	38	52	3 below.	4	5	1 less.	61	51
	7. ENGLAND, N.W.	72	34	52	5 below.	5	9	4 more.	38	33
	8. ENGLAND, S.W.	66	43	54	4 below.	5	3	2 less.	35	31
	9. IRELAND, N.	68	41	53	3 below.	4	8	2 more.	51	44
	10. IRELAND, S.	69	38	54	3 below.	3	6	0 (average).	46	40

General Remarks.

Weather in Ireland and Scotland has been moderately fine, though with some rain; generally overcast and very showery in England. Hail fell at some of the western stations on the 7th, and thunder occurred at Brookeborough and Hillington.

Temperature was again below the mean in all districts. Over the inland and eastern parts of England the deficit was as much as 5° or 6° and elsewhere 3° or 4°. The highest of the maximum readings occurred at our north-western stations, and were registered on the 3rd, when the thermometer rose to 72° at Barrow-in-Furness and 71° at Glasgow. The minima were low in all parts of the country, and during the early morning of the 5th the sheltered thermometer went down to about 35° in nearly all parts of Great Britain; at many of our inland stations a sharp ground frost was experienced.

Rainfall was less than the mean in "England, S.W.," and "Scotland, W.," equal to it in "Ireland, S.," but slightly more than the mean in all other districts.

Bright sunshine shows a decided decrease in England but a slight increase in Ireland and Scotland. The number of hours recorded varies from 69 hours in "Scotland, E.," to 26 hours in the "Midland Counties" and "England, S."

Wind was north-easterly during the first two days, northerly on the 3rd and 4th, and westerly during the remainder of the period. In force it was generally moderate in the E. and S.E., but fresh in the W. and N., and on the 4th and 7th blew a fresh gale at Scilly and a moderate gale on some of the exposed parts of our northern and north-western coasts.

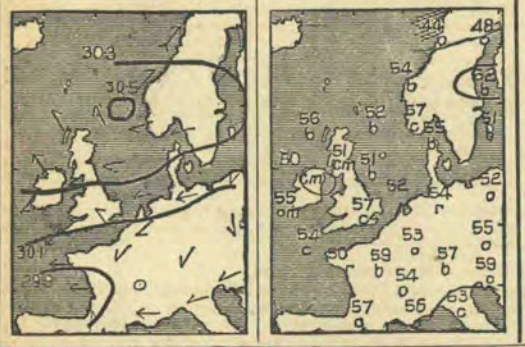
Q 1766. 100.—6/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending June 7, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.



Tuesday, June 1.

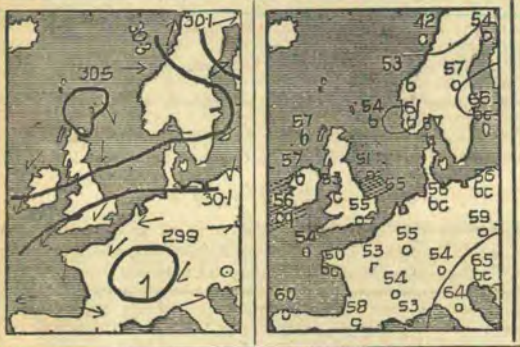
Weather very fine over nearly the whole of these Islands and Scandinavia, dull in most other places with rain in N. Germany and the W. of France. Weather cloudy and showery in the S. but fine in the N. during day.

Temperature fallen over France, risen in nearly all other places. Readings exceedingly uniform, between 50° and 59° over western Europe, and maxima during the day between 55° and 65°.

Wind easterly over nearly the whole of western Europe, but south-westerly in the N. of Norway; light or moderate in force generally, but blowing freshly over the Bay of Biscay and at Scilly. Wind backing to the northward later.

Sea moderate or slight.

Barometer risen briskly in the northern parts of these Islands and slightly over Scandinavia, fallen over France. Shallow depression over Bay of Biscay. Mercury falling S., rising N. during day.



Wednesday, June 2.

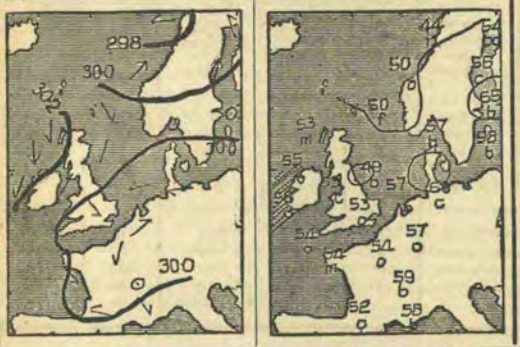
Weather fine in the N. and N.W. of these Islands, over N. Germany, Denmark, and the S. of Scandinavia, dull and rainy elsewhere. Little change later, weather continuing fair in the North.

Temperature risen on our W. and N. coasts, in the W. of France, and over the Baltic, fallen elsewhere. Readings high in Sweden, uniform between 50° and 59° over western Europe. Maxima again between 55° and 65° generally.

Wind north-easterly or east-north-easterly over nearly the whole of these Islands, but drawing into N. in the W. of France; light in force in the North, but blowing moderately or freshly elsewhere. Moderate north-easterly winds holding all day.

Sea rough Valentia.

Barometer rising somewhat on our N.W. coasts and in W. France, falling elsewhere. Small anticyclone in N. Scotland, and large shallow depression over France. Barometer falling all day—most in the North.



Thursday, June 3.

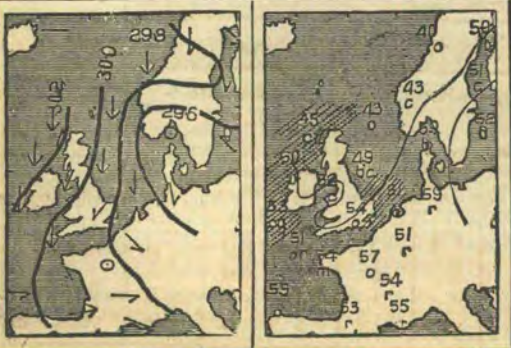
Weather fine over Sweden and Denmark, and on our N.E. and N.W. coasts, dull and rainy elsewhere. Dull and unsettled all day, except in the N.W. and N.E. Slight rain generally.

Temperature fallen in nearly all places, and low for the time of year, except in Sweden and Denmark; readings ranging over these Islands between 49° and 62°, and the maxima between 60° and 69°.

Wind south-westerly in Norway, northerly all over the United Kingdom and N. of France; moderate in force generally. Moderate northerly breezes continuing all day.

Sea rough at Valentia.

Barometer falling in nearly all parts of western Europe—quickly Norway—and large depressions shown, one over the N. of Scandinavia and a second over N. Germany. Anticyclone in W. Pressure giving way all day, most in the East.



Friday, June 4.

Weather fine on our N.W. coasts and over the Skager Rack, dull or cloudy elsewhere, with rain over France. Fine in the N. and W., but dull and showery in the E. and S.E. during the day.

Temperature fallen in nearly all places—quickly in E. Scotland—and readings low generally for time of year, ranging from 54° in London and 56° at Leith, to 43° in the Shetlands. Low all day, and maxima between 50° and 60° in most places.

Wind northerly all over these Islands and their neighbourhood; blowing strongly at all our more northern and western stations and in W. Norway. Strong northerly winds all day, reaching a gale at Aberdeen.

Sea rough on our W., N., and S.E. coasts.

Barometer fallen everywhere—quickly over Scandinavia. Anticyclone still shown in N.W. with large depression over Denmark and the S. of Norway and Sweden, and smaller one over Bay of Biscay. Barometer falling in N. all day, rising elsewhere.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, June 5.

Weather fine over the greater part of England, dull elsewhere, with rain on our N.W. coasts. Sky overcast during greater part of day, with slight rain or drizzle in a few places.

Temperature risen over these Islands, fallen on the Continent—quickly in Sweden; readings ranging from 54° at Valentia to 46° in the Shetlands. Temperature low generally for time of year.

Wind north-westerly over nearly the whole of these Islands and the North Sea, and northerly over France; moderate to fresh in force. Wind north-westerly in most places all day, but backing to S.W. in the Shetlands.

Sea rough in the N.W. and N.E.

Barometer falling briskly in Scotland and Scandinavia, rising over Ireland, England, and France. Pressure decreasing everywhere except the S.W. coasts later, and fresh depression appearing in the N.

Sunday, June 6.

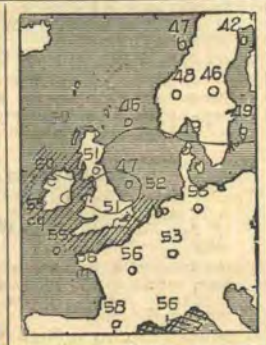
Weather fine in Scotland, dull, rainy, and squally elsewhere. Sky clearing considerably later, and weather fine and bright in our eastern districts.

Temperature changed very little, but general tendency upward. Readings ranging from 58° at Cork and 57° at Leith to 48° at Stornoway. Thermometer low in Scotland all day.

Wind north-westerly to westerly in nearly all places, but drawing in to S.W. over Holland. Moderate in force over the North Sea but fresh or strong elsewhere. Strong and gusty north-westerly and westerly breezes continuing all day.

Sea rough on several parts of our western coasts.

Barometer falling in nearly all parts of our area, but rising in the extreme S.E. of France and over the Baltic. Readings highest off the N.W. coast of Spain, lowest near Christiansund. Pressure giving way slowly all day.



Monday, June 7.

Weather fine in the east of Scotland, cloudy or dull elsewhere, with rain over nearly the whole of England. Sharp thunderstorm in East in afternoon. Weather improving towards evening but remaining showery generally.

Temperature risen a little on the continent generally, fallen several degrees over these Islands; low for the season. Readings ranging from 46° at York to 55° in the S.W. Maxima low everywhere.

Wind north-westerly in Scotland and Ireland, westerly over the Channel and France, and south-westerly at our eastern and central stations; fresh or strong in force in the W. and S. and reaching a gale at Scilly. Scarcely any change during day.

Sea rough in the W. and S.

Barometer falling everywhere—quickly at our central stations. Area of high pressure lying over the S.W. of France, with large depression over Norway and the North Sea. Small depression crossing England from the westward. Pressure increasing in W. and decreasing in E. during day.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Temperature. Lowest observed.	Temperature. Average for the Week.	Temperature. Difference from the Mean.	Rainfall. No. of Days with Rain.	Rainfall. Total fall in the Week.	Rainfall. Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Bright Sunshine. Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	59	40	47·8	−2·2	5	0·18	−0·11	*	*
	Stornoway	61	41	49·6	−2·2	5	0·62	−0·04	60	49
	Wick	67	34	48·9	−3·8	5	0·63	+0·35	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	63	40	51·7	−7·1	3	0·11	−0·29	*	*
	Jersey (Noirmont)	62	45	53·0	−5·2	5	0·22	−0·16	28	25

The above observations made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	65	37	49·6	−3·8	5	0 39	+0·01	*	*
	Aberdeen	62	40	51·1	−3·1	5	0·92	+0·50	66	55
	Glenalmond	69	38	49·7	−4·8	1	0·07	?	69	58
	Leith	69	42	53·3	−1·7	3	0·22	−0·18	*	*
2. ENGLAND, N.E.	Shields	60	42	51·4	−4·6	4	0·14	−0·26	*	*
	Durham	66	39	51·3	−4·5	6	0·48	+0·07	39	33
	York	65	36	52·3	−4·5	7	0·50	+0·04	43	37
	Spurn Head	59	44	50·2	−6·4	7	0·62	?	*	*
	Kelstern (Lincolnsh.) ⊕	63	37	50·4	−6·8	7	1·44	+1·05	26	23
3. ENGLAND, E.	Hillington ⊕	62	39	51·4	−6·6	7	1·27	+1·02	30	26
	Yarmouth	64	45	52·5	−5·0	7	1·03	+0·58	*	*
	Cambridge	64	37	52·9	−5·5	6	0·74	+0·34	23	20
	Rothamsted	63	36	51·2	−7·5	7	0·57	+0·11	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	61	39	52·5	−4·5	6	0·60	+0·07	*	*
	Nottingham	63	34	51·9	−5·8	7	1·10	+0·59	*	*
	Loughborough	61	37	51·8	−6·2	6	1·06	+0·50	*	*
	Leicester	62	38	51·6	−6·5	7	1·25	+0·69	?	?
	Birmingham (Oscott)	59	40	50·8	−7·2	5	0·89	+0·30	*	*
	Shrewsbury ⊕	61	39	52·0	−6·0	7	0·70	+0·31	*	*
	Churchstoke ⊕	59	39	50·5	−7·5	7	0·38	?	22	19
	Hereford ⊕	62	38	51·9	−6·1	5	0·65	+0·23	*	*
	Cirencester	64	41	52·2	−6·5	7	0·33	−0·21	29	26
	Oxford	63	41	52·0	−6·9	5	0·39	−0·08	?	?
5. ENGLAND, S.	London†	66	35	54·5	−4·0	6	0·46	−0·04	19	17
	Marlborough ⊕	64	41	52·6	−6·3	5	0·36	−0·09	*	*
	Strathfield Turgiss ⊕	65	35	53·7	−4·7	6	0·56	+0·14	*	*
	Dover	62	42	54·8	−2·2	6	1·16	+0·62	*	*
	Hastings (St. Leonard's)	67	37	54·3	−3·0	7	0·50	+0·19	*	*
	Southampton	65	40	55·1	−3·4	5	0·23	?	33	29
	Hurst Castle	63	43	55·0	−2·9	5	0·18	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	63	39	50·2	−3·8	4	0·69	?	*	*
	Glasgow	71	42	52·8	−2·2	5	0·28	−0·34	73	61
	Ardrossan	69	43	52·3	−2·6	5	0·36	−0·25	*	*
	Silloth (Cumberland)	70	38	53·7	−1·8	3	0·23	−0·19	57	48
	Douglas (Isle of Man)	68	44	53·2	−2·3	5	0·84	+0·46	52	45
7. ENGLAND, N.W.	Barrow-in-Furness	72	42	54·6	−1·9	4	0·61	?	*	*
	Stonyhurst	65	37	50·6	−6·0	6	1·18	+0·56	44	38
	Blackpool ⊕	67	40	52·3	−4·3	5	0·88	+0·46	*	*
	Manchester	63	34	51·1	−6·4	6	0·89	+0·40	*	*
	Liverpool Obsy (Bidston)	64	45	53·0	−4·5	6	0·75	+0·33	*	*
	Llandudno ⊕	62	46	53·2	−3·8	5	0·76	?	32	28
	Holyhead	57	47	51·9	−4·6	4	0·78	+0·40	*	*
8. ENGLAND, S.W.	Pembroke	60	45	51·9	−6·0	6	0·44	+0·04	31	27
	Barnstaple	66	46	55·5	−2·7	3	0·35	−0·10	*	*
	Falmouth	62	45	54·5	−4·5	5	0·21	−0·39	39	35
	Plymouth	65	43	55·8	−2·9	5	0·19	−0·21	*	*
	Prawle Point	64	43	54·4	−4·3	6	0·20	?	*	*
9. IRELAND, N.	Londonderry	66	42	51·6	−3·9	4	0·58	+0·12	*	*
	Mullaghmore	62	45	52·7	−3·3	3	1·15	?	*	*
	Markree Castle	68	43	52·8	−3·4	3	0·75	+0·05	46	40
	Brookeborough	68	41	52·5	−3·5	3	0·64	?	*	*
	Armagh	66	42	52·8	−3·2	5	0·75	+0·42	56	48
	Donaghadee	61	44	52·9	−2·5	6	0·70	?	*	*
10. IRELAND, S.	Dublin	67	41	54·2	−1·9	6	0·81	+0·29	46	40
	Parsonstown	68	38	53·5	−3·0	3	0·63	+0·11	53	46
	Roche's Point	69	45	56·6	−0·6	1	0·15	−0·48	*	*
	Valentia	66	48	55·4	−1·6	3	0·79	+0·16	39	35
	Foynes	61	42	51·6	−5·2	3	0·60	?	*	*

Stations marked ⊕ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The Sunshine values for London are the means of observations made at Hampstead, Kew Observatory, and the London Institution, Finsbury Circus.

Note.—The "Bright Sunshine" values for Southampton for the week ending May 24th should be 53 hrs. and 38 per cent. At Hurst Castle asterisks should be inserted.

Meteorological Office, (Signed) ROBERT H. SCOTT,

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 24.] WEEK ENDING MONDAY, JUNE 14, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positons of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester Oxford.
5. ENGLAND, S.—London, Marlborough, Stratfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	72	37	54	2 below.	3	3	1 less.	41	34
	2. ENGLAND, N.E.	72	36	52	5 below.	3	6	1 more.	40	34
	3. ENGLAND, E.	75	37	54	6 below.	3	3	2 less.	46	40
	4. MID. COUNTIES	75	35	54	6 below.	4	4	2 less.	44	38
	5. ENGLAND, S.	74	36	54	5 below.	3	3	1 less.	40	35
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	69	35	51	5 below.	3	4	2 less.	54	45
	7. ENGLAND, N.W.	71	35	53	5 below.	3	7	2 more.	42	36
	8. ENGLAND, S.W.	71	40	54	6 below.	3	4	0 (average).	54	48
	9. IRELAND, N.	68	34	51	6 below.	3	8	5 more.	59	50
	10. IRELAND, S.	70	38	53	5 below.	4	9	4 more.	59	51

General Remarks.

Weather was rather cloudy in all parts of the kingdom, and at times very dull and showery. Thunderstorms were experienced at several stations during the first few days, and again in some places at the close of the period.

Temperature was again below the mean in all districts. In "Scotland, E.," the deficit was only 2°, but in all other parts of the country as much as 5° or 6°. The thermometer was highest in most places on the 12th or 13th, when 75° was reached at Nottingham and Cambridge; lowest on the 9th or 10th, when readings of 34° or 35° in the shade were registered over central England and Ireland. At some of the inland stations slight ground frosts occurred.

Rainfall was a little more than the mean in "England, N.E.," "England, N.W.," and over Ireland, and equal to the mean in "England, S.W.," but in all other districts the fall was slightly less than the average.

Bright sunshine shows a decrease in Scotland, but an increase elsewhere. The sun was obscured most over the northern parts of England and E. of Scotland, and least in Ireland and the S.W. of England.

Wind was generally south-westerly (except in the extreme N.) during the first two days, very light and variable on the 10th and 11th, and southerly on the 12th and 13th, while on the 14th a northerly breeze sprang up in all parts of the country. In force the wind was generally light or moderate, but on the 12th and 13th the southerly breeze blew freshly or strongly on many parts of our western and northern coasts.

Q 1856 100.—6/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending June 14, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, June 8.

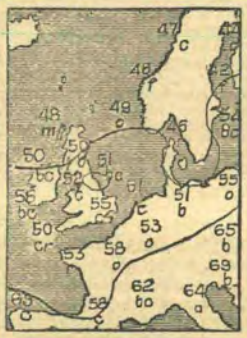
Weather fine at most of our more northern stations, in the E. of France, and over Denmark, cloudy or dull elsewhere, with rain in the W. of Ireland and N.W. of France. Very showery all day, but clearing up in the S. in the evening.

Temperature scarcely changed on the Continent, but risen over England and fallen in Ireland and Scotland. Readings uniform, ranging from 44° in N. Ireland to 55° in London. Maxima between 55° and 65°.

Wind north-westerly in Ireland, westerly to south-westerly over France, the Channel, England, and the North Sea, but northerly in the E. of Scotland and south-easterly in the W. of that county. Northerly winds in Scotland during day with westerly winds elsewhere.

Sea rough in the S.W.

Barometer falling on our western coasts, rising elsewhere. Area of high pressure over S. France, with large depression over Scandinavia and small depression over the St. George's Channel. Small disturbance travelling across us during day and pressure recovering in W.



Wednesday, June 9.

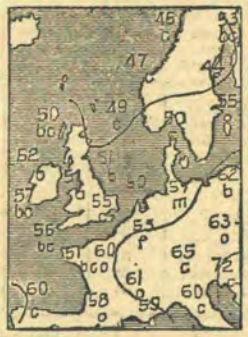
Weather fine over the greater part of these Islands, but dull over the Channel and on the Continent generally. More or less cloudy all day, with rain in the E. and S.E.

Temperature changing rather irregularly, but thermometer higher at most of our own and lower at the Foreign stations. Maxima low for season, only exceeding 60° at Nottingham.

Wind north-westerly on our northern coasts, but south-westerly over France, England, the North Sea, and Sweden. Very light and variable breezes reported over these Islands during day.

Sea moderate to slight.

Barometer fallen over France, risen elsewhere. An area of high readings over France, with large depression over Scandinavia and smaller depression on our S.W. coasts. Pressure decreasing in S. and increasing in N. all day.



Thursday, June 10.

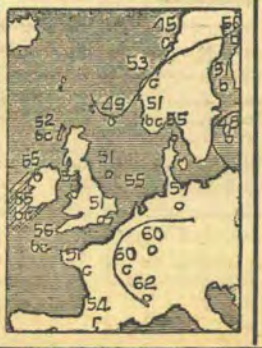
Weather again fine at most of our own, but dull at most continental stations; rain falling over Straits of Dover. Weather fine all day, and scarcely any rain falling.

Temperature changes very irregular; readings uniform, ranging from 47° at York to 57° at Valentia; maxima higher than of late, thermometer reaching 69° at Nottingham, and 67° at Cambridge.

Wind easterly over nearly the whole of these Islands, westerly over the S. of Scandinavia, and very variable over France. Wind very light in force all day.

Sea slight or smooth.

Barometer fallen over France, risen elsewhere. Pressure rather higher over the S.E. of France and over the Baltic than elsewhere, but readings exceedingly uniform over western Europe. Barometer falling in S. during day, readings continuing very uniform.



Friday, June 11.

Weather dull over our eastern districts as well as in France and the Netherlands, fine elsewhere; rain falling at Yarmouth, the Helder, and in the S.W. of France. Weather fair in most places during day, but becoming dull in W. Ireland.

Temperature risen except in the S.W. of France; readings again uniform, ranging from 49° in the Shetlands to 60° at Prawle Point. Maxima again between 55° and 65° generally.

Wind light or moderate on all but the south-western French coasts,—blowing from S. over Ireland and Scotland, and from N.E. and N. over the North Sea, England, and the W. of France. The southerly wind in the W. increasing and extending later.

Sea rough at Valentia, moderate or slight elsewhere.

Barometer fallen over France, risen over these Islands and Scandinavia; large shallow depression lying over France, with comparatively high readings over our N.W. coasts. Barometer falling rather briskly at Valentia later.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, June 12.

Weather dull over Ireland, the E. and S.E. of England, and the Netherlands, fine in most other places; heavy rain falling during day on our western coasts, but weather very fine in our eastern districts.

Temperature fallen some degrees over central and eastern England, risen in most other places. Readings very uniform, ranging from 47° at Oxford, to 58° at Scilly and 57° at Wick. Maxima exceeding 70° at inland stations.

Wind southerly over the greater part of the Kingdom, but still easterly over Denmark, and northerly on our S.E. coasts. Blowing strongly in extreme W. and reaching a gale at Valentia. Not much change during day, still blowing gale in Ireland.

Sea rough or high all round our W. and N.W. coasts.

Barometer rising briskly over Scandinavia and slightly on our E. coasts and over France, falling briskly in the W. Readings high over S.W. France and the Baltic, rather deep depression off W. Ireland.

Sunday, June 13.

Weather very fine in the E. of England, the E. of France, and over the Netherlands, dull or cloudy in most other places, with rain in W. Scotland. Rain falling in W. of England during day, but weather fine elsewhere.

Temperature risen over England and E. of Scotland, fallen on our western coasts; readings ranging from 52° in the Shetlands and 53° at Pembroke, to 63° at Nottingham. Maxima between 70° and 75° at the inland stations.

Wind north-westerly in the S. of Ireland, south-westerly and southerly on our other coasts, and easterly over Scandinavia; blowing strongly at Scilly and in the N. of Scotland. The north-westerly wind extending eastward over us during the day.

Sea rough at Scilly and off the N. of Scotland.

Barometer falling over the S.W. of England and N.W. of France, rising elsewhere; areas of high pressure still shown over France and Sweden, with large depression to the north-westward of Scotland and smaller one over the St. George's Channel. Pressure giving way in S. later.

Monday, June 14.

Weather fine at our western and northern stations, and over the greater part of Scandinavia, dull or cloudy in most other places. Rain falling at Hurst Castle. Weather dull, with some rain over our central and eastern districts.

Temperature fallen in most places; readings ranging from 52° at Liverpool to 60° at Dover and 57° at Valentia. Maxima rather lower than on previous days, but still reaching 70° at central stations.

Wind northerly over nearly the whole country, but north-westerly in France and westerly at our south-eastern stations, blowing freshly on some parts of our western coasts. Wind northerly all day and moderate in force in most places.

Sea rough off Scilly.

Barometer rising generally. Areas of high pressure shown—one over Lapland and a second over Ireland, with a depression over N. Germany and a shallow one over France. Pressure increasing slowly during the day.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⇛ = a heavy gale; ⇒ = a gale; → = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

Values for each Station in Scotland, N. and the Channel Islands.

Districts.	Names of Stations.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	57	39	48·9	−2·0	4	0·45	+0·16	*	*
	Stornoway	58	37	48·8	−4·1	2	0·19	−0·51	49	40
	Wick	63	36	51·3	−2·3	4	0·18	−0·13	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	61	48	54·8	−5·1	4	0·59	+0·10	*	*
	Jersey (Noirmont)	63	48	54·9	−4·7	5	0·58	+0·13	42	38

The above observations made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	68	38	53·3	−1·4	3	0·20	−0·16	*	*
	Aberdeen	67	42	52·7	−2·7	3	0·36	−0·05	41	34
	Glenalmond	67	37	55·8	−0·2	3	0·29	?	40	33
	Leith	72	40	54·2	−1·8	3	0·21	−0·22	*	*
2. ENGLAND, N.E.	Shields	66	40	51·4	−5·6	2	0·24	−0·16	*	*
	Durham	71	36	52·7	−4·6	3	0·71	+0·30	41	34
	York	72	38	53·3	−4·6	1	0·37	−0·16	35	30
	Spurn Head	62	43	52·4	−5·6	3	0·96	?	*	*
	Kelstern (Lincolnsh.) ℳ	69	37	52·1	−6·4	4	0·90	+0·48	43	37
3. ENGLAND, E.	Hillington ℳ	73	38	54·5	−5·5	4	0·38	−0·10	46	40
	Yarmouth	65	42	53·5	−5·3	4	0·44	−0·05	*	*
	Cambridge	75	37	55·0	−4·0	1	0·13	−0·28	46	40
	Rothamsted	69	38	53·1	−7·1	3	0·29	−0·20	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	74	36	53·9	−4·4	4	0·19	−0·33	*	*
	Nottingham	75	36	55·1	−3·9	? 3	? 0·49	−0·01	*	*
	Loughborough	71	38	54·6	−4·7	4	0·29	−0·26	*	*
	Leicester	69	39	54·2	−5·3	4	0·36	−0·20	?	?
	Birmingham (Oscott)	70	39	53·6	−6·2	2	0·08	−0·51	*	*
	Shrewsbury ℳ	71	35	51·7	−7·5	6	0·87	+0·47	*	*
	Churchstoke ℳ	67	36	50·4	−9·1	5	1·05	?	43	37
	Hereford ℳ	70	35	53·1	−6·1	4	0·33	−0·08	*	*
	Cirencester	71	37	53·9	−6·1	3	0·18	−0·25	45	39
	Oxford	69	41	54·3	−6·2	2	0·09	−0·37	?	?
5. ENGLAND, S.	London†	73	40	55·8	−4·2	3	0·20	−0·30	31	27
	Marlborough ℳ	71	36	53·1	−7·2	4	0·17	−0·28	*	*
	Strathfield Turgiss ℳ	74	36	54·4	−5·6	2	0·17	−0·23	*	*
	Dover	65	46	54·4	−4·1	4	0·54	+0·09	*	*
	Hastings (St. Leonard's)	63	46	53·4	−5·3	4	0·39	+0·09	*	*
	Southampton	70	39	54·6	−5·4	3	0·18	?	49	43
	Hurst Castle	65	42	54·4	−4·6	3	0·09	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	63	37	49·8	−5·2	3	0·37	?	*	*
	Glasgow	67	39	51·2	−5·8	2	0·30	−0·36	37	31
	Ardrossan	63	40	52·1	−3·8	3	0·20	−0·31	*	*
	Silloth (Cumberland)	69	37	53·8	−3·1	1	0·21	−0·22	60	50
	Douglas (Isle of Man)	62	35	49·9	−6·8	4	0·65	+0·27	64	54
7. ENGLAND, N.W.	Barrow-in-Furness	67	42	55·0	−3·4	2	1·11	?	*	*
	Stonyhurst	68	38	52·3	−5·6	3	0·92	+0·24	40	34
	Blackpool ℳ	68	35	51·9	−6·1	3	0·98	+0·55	*	*
	Manchester	68	38	52·3	−6·4	5	0·45	−0·10	*	*
	Liverpool Obsy (Bidston)	71	42	53·9	−4·8	4	0·64	+0·19	*	*
	Llandudno ℳ	68	41	52·3	−6·7	2	0·60	?	43	37
	Holyhead	61	45	53·0	−5·0	3	0·44	+0·06	*	*
8. ENGLAND, S.W.	Pembroke	58	44	51·7	−7·3	4	0·50	+0·11	57	50
	Barnstaple	71	40	57·0	−2·1	4	0·62	+0·16	*	*
	Falmouth	61	46	53·7	−6·3	4	0·51	−0·09	51	45
	Plymouth	68	40	54·4	−5·6	2	0·32	−0·08	*	*
	Prawle Point	66	44	53·1	−6·8	3	0·47	?	*	*
9. IRELAND, N.	Londonderry	68	34	52·7	−4·3	1	0·56	+0·06	*	*
	Mullaghmore	64	41	52·7	−4·6	3	0·72	?	*	*
	Markree Castle	64	34	50·1	−7·5	3	1·50	+0·77	72	61
	Brookeborough	66	34	51·7	−5·6	4	0·90	?	*	*
	Armagh	63	38	51·3	−5·7	3	0·92	+0·59	46	39
	Donaghadee	60	36	50·0	−7·0	3	0·16	?	*	*
10. IRELAND, S	Dublin	64	41	52·6	−4·9	3	0·21	−0·36	48	41
	Parsonstown	66	38	52·0	−5·5	5	0·69	+0·19	53	46
	Roche's Point	70	45	55·9	−2·4	3	1·09	+0·50	*	*
	Valentia	62	40	52·6	−5·4	4	2·01	+1·35	75	65
	Foynes	64	40	52·6	−5·3	3	0·40	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The Sunshine values for London are the means of observations made at Hampstead, Kew Observatory, and the London Institution, Finsbury Circus.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 25.] WEEK ENDING MONDAY, JUNE 21, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	71	44	56	0 (average).	3	2	2 less.	50	41
	2. ENGLAND, N.E.	73	42	57	3 below.	3	7	3 more.	40	34
	3. ENGLAND, E.	75	47	59	2 below.	5	7	2 more.	47	41
	4. MID. COUNTIES	76	44	59	2 below.	6	9	4 more.	28	24
	5. ENGLAND, S.	75	51	60	1 below.	6	12	6 more.	27	24
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	76	37	61	3 above.	3	2	3 less.	60	50
	7. ENGLAND, N.W.	78	47	60	0 (average).	4	7	1 more.	38	32
	8. ENGLAND, S.W.	75	51	59	1 below.	5	5	0 (average).	29	25
	9. IRELAND, N.	76	37	59	1 above.	3	7	1 more.	49	41
	10. IRELAND, S.	75	41	59	0 (average).	3	7	2 more.	42	37

General Remarks.

Weather during this period has been generally fine in Scotland and the extreme N. of England, but over the other parts of our Islands the sky has been very cloudy, with frequent showers and occasional thunderstorms.

Temperature was a little above the mean in "Ireland, N.," and "Scotland, W.," and equal to it in "Scotland, N.," and "England, N.W.," but elsewhere (though much higher than of late) readings were again below the mean for the time of year. The highest of the minima occurred at our North-western stations and were registered on the 18th or 19th; on the former day the thermometer rose to 78° at Manchester and 76° in several other places. Readings were lowest at the commencement of the period, and at Silloth and Markree Castle a minimum was recorded of 37° in the shade.

Rainfall was less than the mean in the Scotch districts, and equal to the mean in "England, S.W.," but in all other districts the fall was more than the average. In "England, S.," the excess was rather large.

Bright sunshine shows a slight increase in Scotland, but a decrease in nearly all other places. The number of hours recorded varies from 60 in "Scotland, W.," to about 28 in the central and Southern parts of England.

Wind was northerly or north-easterly during the first three days, north-easterly to easterly on the 18th, generally easterly on the 19th, south-easterly on the 20th, and southerly (except in the extreme N.) on the 21st. In force the wind was light or moderate on most days, but blew strongly along our E. coast on the 15th and reached the force of a gale at Shields and Spurn Head.

Q 1942. 100.—6/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE during the Week ending June 21, 1880.

Synoptic Weather Charts.—8 a.m.		Weather during the 24 hours succeeding the date of the Charts.
Barometer and Wind.	Cloud, Rain, Sea, and Temperature.	
		Tuesday, June 15. *Weather* fine over Ireland, Wales, and the greater part of Scotland, dull or cloudy elsewhere, with rain over the Netherlands and S.E. of England. Weather remaining fine in the W. and N., and dull and rainy in the E. all day. *Temperature* fallen considerably at the south-eastern stations, and slightly in the S.W. of France, risen elsewhere; readings ranging from 51° at Spurn Head to 63° at Leith. Maxima exceeding 70° at Prawle Point, Roche's Point, and Ardrossan. *Wind* easterly over Denmark and southern Scandinavia, northerly over these Islands and France; fresh or strong in the E., moderate generally. Reaching a gale at Shields later, little other change. *Sea* rough on our N.E. coasts. *Barometer* falling briskly over the Netherlands, and slowly over France, but rising elsewhere. An area of high readings lying over our western and northern districts, with a large depression over N. Germany. Scarcely any change later.
		Wednesday, June 16. *Weather* fine at Valentia, at some of our extreme northern stations, and over the countries to the eastward of the North Sea, dull elsewhere, with rain over central and south-eastern England. Dull and wet in the S. and S.W. all day, fine in the W. and N. *Temperature* slightly higher on both shores of the North Sea, lower elsewhere; uniform between 52° and 59° over these Islands. Maxima again about 70° at Roche's Point and Ardrossan, between 55° and 65° elsewhere. *Wind* easterly over the North Sea and extreme N. of Scotland, northerly on our other coasts and over the Channel, and south-westerly in France. Moderate in force generally. Wind veering to E. and N.E. later. *Sea* rough at Scilly and the mouth of the Humber. *Barometer* risen briskly over the countries to the eastward of the North Sea, and slightly over Scotland, falling elsewhere. Area of high pressure to the northward of Scotland, with small depression over the Straits of Dover. Depression moving eastward during day and pressure increasing in S.E.
		Thursday, June 17. *Weather* very fine over all the more northern parts of the kingdom and to the eastward of the North Sea, cloudy and unsettled in most other places, with mist in the S. Dull and rainy all day in S. *Temperature* fallen in Norway, risen elsewhere; readings ranging between 54° and 62° over these Islands. Maxima exceeding 70° at our inland stations, and as high as 80° at the Scaw and Stockholm. *Wind* westerly over Norway but easterly and north-easterly over these Islands and France. Moderate in force on most coasts, but very light in the N. Hardly any change during day, easterly breezes prevailing generally. *Sea* rough on the Lancashire coast. *Barometer* fallen in the N. of Scandinavia, risen elsewhere. Large anticyclone over Scotland and the North Sea, with large area of low pressure over France and the Channel. Pressure giving way during day, but change moderately uniform.
		Friday, June 18. *Weather* very fine over nearly the whole of these Islands, the Netherlands, and Denmark, cloudy or dull elsewhere, with fog, rain, and mist on our S.W. coasts. Weather fine generally all day, but thunderstorm in S.W. *Temperature* fallen on our E. coast, risen in most other places; readings ranging from 54° in North Scotland to 64° in London. Maxima rather high generally, between 70° and 75° at our inland stations. *Wind* westerly over Scandinavia, easterly over these Islands and France; light or moderate in force in all places. Wind easterly all day generally, but shifting to S. at Valentia. *Sea* slight or smooth. *Barometer* falling slightly in all parts of western Europe. Area of high pressure lying over Scotland and the North Sea, with comparatively low pressures over the Bay of Biscay and over Lapland. Pressure giving way uniformly all day.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, June 19.

Weather fine at most northern and north-western stations, as well as over the Netherlands, Denmark, and Sweden, dull elsewhere, with rain, fog, and mist over England. Weather improving later, and very fine in S.E.

Temperature risen in S.E. but fallen generally; readings ranging from 50° in the Shetlands to 60° in London and S. Ireland. Maxima between 70° and 75° at Ardrossan and in the S.E. of England, between 65° and 70° elsewhere.

Wind southerly over France, easterly to south-easterly over the North Sea and on most of our coasts, and northerly in Scandinavia. Light or moderate in force generally. Southerly breezes continuing in the S. and easterly breezes in the N. all day.

Sea slight or smooth.

Barometer rising in Sweden, falling elsewhere. Pressure highest over the North of Scandinavia, lowest off our S.W. coasts, but with small subsidiary depressions in the S.E. Pressure decreasing all day but distribution little changed.

Sunday, June 20.

Weather fine over Scandinavia, Denmark, the Netherlands, and E. coast of England, dull in most other places, with rain in the S. of Ireland, Wales, and central England. Rather cloudy and unsettled all day with dense fog in Scotland.

Temperature risen in most places. Readings ranging from 49° in the Shetlands to 63° at Liverpool and 60° in London. Maxima about 70° at our inland stations, between 65° and 70° elsewhere.

Wind south-westerly over France and between E. and S.E. on our coasts; blowing strongly over the Bay of Biscay, at Valentia, and Wick. South-westerly breezes extending to the Channel later but easterly winds continuing elsewhere.

Sea rough on the S. coast of Ireland and off Ushant.

Barometer rising over the S.W. of France and over Sweden, falling elsewhere. Areas of high readings over the Baltic and the Peninsula with a depression off the W. of Ireland. Small secondary disturbances over our S. and S.E. coasts. Very little change later.

Monday, June 21.

Weather fine over central and south-eastern England, the Netherlands, and Denmark; dull elsewhere, with rain at several stations, and thick fog in the N.E. of Scotland. Fine all day over England, showery in N. Ireland, and foggy in Scotland.

Temperature risen on our E. coast and over the Baltic, fallen elsewhere. Readings moderately uniform, ranging over these Islands between 53° and 63°. Maxima a little over 70° in the S.E., between 65° and 70° elsewhere.

Wind southerly over the greater part of France and these Islands, easterly in the N. of Scotland; blowing freshly at Rochefort but light or moderate generally. Wind veering to W. over the Bay of Biscay later.

Sea slight or smooth except off Lorient.

Barometer rising slightly in the S.E., falling generally. Area of high pressure over central and eastern France, with large area of low readings over our western coasts. Mercury rising slowly all day but distribution little changed.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟩⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.	*	*
SCOTLAND, N.	Sumburgh Head									
	Stornoway	67	43	55·3	+1·6	1	0·03	−0·69	77	62
	Wick	63	43	53·8	−0·4	2	0·03	−0·36	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	63	52	56·8	−3·9	4	0·16	−0·39	*	*
	Jersey (Noirmont)	68	52	57·9	−3·0	7	0·65	+0·33	28	25

The above observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow

Districts.	Names of Stations.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	67	44	56·9	+1·0	1	0 03	−0·36	*	*
	Aberdeen	68	45	56·0	−0·5	4	0·22	−0·18	41	33
	Glenalmond	71	44	57·7	+0·7	3	0·20	?	58	48
	Leith	64	44	54·8	−2·1	4	0·51	+0·05	*	*
2. ENGLAND, N.E.	Shields	63	47	53·8	−4·2	2	0·62	+0·23	*	*
	Durham	73	42	55·3	−3·4	3	1·24	+0·79	34	28
	York	72	45	58·2	−0·6	3	0·36	−0·19	45	38
	Spurn Head	66	48	59·7	+0·3	4	0·34	?	*	*
	Kelstern (Lincolnsh.) ℳ	67	47	55·3	−4·7	4	0·82	+0·32	41	35
3. ENGLAND, E.	Hillington ℳ	74	49	59·7	−0·4	4	0·80	+0·12	47	40
	Yarmouth	67	51	57·0	−2·9	3	0·56	+0·06	*	*
	Cambridge	75	47	60·0	−0·7	5	0·81	+0·35	47	41
	Rothamsted	71	50	58·6	−2·9	6	0·69	+0·17	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	73	44	58·1	−1·4	5	0·79	+0·25	*	*
	Nottingham	76	47	59·1	−1·0	6	0·95	+0·44	*	*
	Loughborough	73	49	59·1	−1·4	5	0·64	+0·07	*	*
	Leicester	71	48	58·5	−2·2	6	0·61	+0·05	?	?
	Birmingham (Oscott)	72	49	58·6	−2·1	6	0·65	+0·06	*	*
	Shrewsbury ℳ	71	48	58·8	−1·3	7	1·02	+0·63	*	*
	Churchstoke ℳ	70	50	57·9	−2·4	6	1·13	?	30	26
	Hereford ℳ	72	52	59·7	−0·4	7	1·52	+1·11		
	Cirencester	76	49	59·5	−1·5	7	1·24	+0·69	26	22
	Oxford	73	50	59·4	−2·6	5	0·69	+0·21	?	?
5. ENGLAND, S.	London†	74	51	59·9	−1·7	7	0·69	+0·18	34	30
	Marlborough ℳ	74	51	59·6	−1·9	6	0·91	+0·46	*	*
	Strathfield Turgiss ℳ	75	51	60·0	−1·0	6	1·52	+1·08	*	*
	Dover	67	52	60·4	+0·4	5	0·80	+0·36	*	*
	Hastings (St. Leonard's)	73	52	59·9	−0·1	5	1·18	+0·86	*	*
	Southampton	69	52	59·8	−0·5	7	1·08	?	20	17
	Hurst Castle	63	53	58·4	−1·6	7	1·92	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	73	50	62·0	+6·1	3	0·17	?	*	*
	Glasgow	70	50	59·6	+2·7	3	0·09	−0·59	66	55
	Ardrossan	76	50	61·8	+5·0	2	0·21	−0·30	*	*
	Silloth (Cumberland)	72	37	59·5	+1·6	5	0·16	−0·28	55	46
	Douglas (Isle of Man)	71	49	59·5	+1·5	3	0·44	+0·05		?
7. ENGLAND, N.W.	Barrow-in-Furness	75	52	62·1	+3·3	3	0·48	?	*	*
	Stonyhurst	70	48	59·1	+0·2	3	0·63	−0·09	38	32
	Blackpool ℳ	72	48	59·7	+0·7	3	0·48	+0·02	*	*
	Manchester	78	47	58·6	−1·3	3	0·65	+0·03	*	*
	Liverpool Obsy (Bidston)	72	50	60·1	+0·4	5	0·70	+0·10	*	*
	Llandudno ℳ	69	51	59·1	−0·3	4	0·90	?	38	32
	Holyhead	69	51	58·9	−0·2	4	0·92	+0·55	*	*
8. ENGLAND, S.W.	Pembroke	64	52	57·2	−2·5	5	0·97	+0·58	34	29
	Barnstaple	75	51	62·7	+2·7	4	0·72	+0·25	*	*
	Falmouth	63	53	57·8	−3·1	7	0·08	−0·52	23	20
	Plymouth	70	53	60·3	−0·7	4	0·25	−0·14	*	*
	Prawle Point	70	52	57·2	−3·4	6	0·41	?	*	*
9. IRELAND, N.	Londonderry	76	42	61·1	+3·1	3	0·24	−0·28	*	*
	Mullaghmore	68	53	60·0	+1·5	3	0·55	?	*	*
	Markree Castle	72	37	58·8	+0·1	3	0·67	−0·06	50	42
	Brookeborough	72	40	59·0	+0·5	3	0·97	?	*	*
	Armagh	69	43	59·4	+1·3	3	1·05	+0·65	47	40
	Donaghadee	68	50	58·1	+0·1	3	0·27	?	*	*
10. IRELAND, S	Dublin	67	46	58·6	−0·2	3	0·48	−0·13	43	37
	Parsonstown	75	41	59·0	+0·4	3	0·54	+0·06	37	33
	Roche's Point	74	50	61·9	+2·2	?	?	?	*	*
	Valentia	69	48	58·7	−0·3	2	1·44	+0·75	46	40
	Foynes	68	48	58·0	−1·0	3	0·36	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

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Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

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2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.)				Rainfall. (Amounts in tenths of an inch.)			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	73	42	59	2 above.	3	3	2 less.	?	?
	2. ENGLAND, N.E.	74	43	58	2 below.	3	4	1 less.	23	19
	3. ENGLAND, E.	75	44	60	1 below.	4	7	2 more.	27	23
	4. MID. COUNTIES	76	43	60	1 below.	4	13	8 more.	40	34
	5. ENGLAND, S.	76	45	59	2 below.	3	6	2 more.	39	34
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	73	45	58	1 above.	4	11	4 more.	26	22
	7. ENGLAND, N.W.	71	48	59	1 below.	3	7	2 more.	28	24
	8. ENGLAND, S.W.	72	51	60	2 below.	2	2	3 less.	54	48
	9. IRELAND, N.	70	44	58	1 below.	5	10	6 more.	26	22
	10. IRELAND, S.	73	46	60	0 (average).	5	6	0 (average).	27	23

General Remarks.

Weather changeable, with heavy thunderstorms over our midland and eastern counties on the 22nd, 23rd, and 24th, and again over the more southern parts of those districts on the 25th and 26th. A good deal of fog at the Scottish stations on the 22nd and 26th.

Temperature a little above the mean in Scotland but below it in Ireland and England; the difference, however, slight in both cases. In "England, N.E.," "Scotland, W.," and some parts of the Midland Counties the highest of the maxima occurred on the 22nd, but at the more southern stations the highest readings were registered towards the close of the week. No very low night readings are reported.

Rainfall a little less than the mean in "Scotland, E.," "England, N.E.," and "England, S.W.," and about equal to it in "Ireland, S.," but more than the mean in all other districts. The excess considerable in the Midland Counties, where the aggregate amount is very much swollen by the heavy falls which accompanied the thunderstorms of the 22nd, 23rd, and 24th. Very heavy rain occurred, locally, in the east and north-east of London on the evening of the 25th.

Bright sunshine was more prevalent in the Midland Counties, "England, S.," and "England, S.W.," than during last week, the percentage of possible duration varying from 34 in the two first named districts to 48 in the last, but in all other places a very decided falling off is reported, the percentage in "England, N.E.," being only 19.

Wind at first westerly in the south, and very variable elsewhere. Decided northerly current setting in over our western stations on the 26th, subsequently backing to S.W. and S. and blowing strongly in the extreme west and north-west on the 27th. Westerly breezes general on the 28th.

Q 2025. 100.—7/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending June 28, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, June 22.

Weather cloudy and rainy over France, the Netherlands, and S. of England, and foggy in Scotland, but sky moderately clear elsewhere, and the weather bright. Heavy thunder showers occurring in several places during the day.

Temperature fallen a little generally, but changes rather irregular; readings ranging from 52° at Shields to 68° at Nottingham. Maxima above 70° at York, Nottingham, and Roche's Point.

Wind very light and variable over the greater part of these Islands, but light southerly breezes reported on our western coasts, moderate to strong westerly winds over France, and easterly breezes over Scandinavia. The westerly winds spreading to the S. of England later; little other change.

Sea moderate to calm.

Barometer rising except in the W. of Norway—rather briskly in W. France. Readings very uniform over the British Isles, but area of high pressure lying over Spain and of low pressure over Lapland. Mercury rising slowly all day.

Wednesday, June 23.

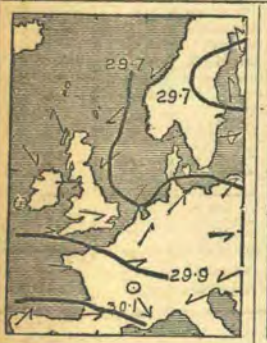
Weather fine over the S.E. of France and over Scandinavia, dull elsewhere, with rain in Brittany and the northern and central parts of England. Rather cloudy all day, with rain in the S.

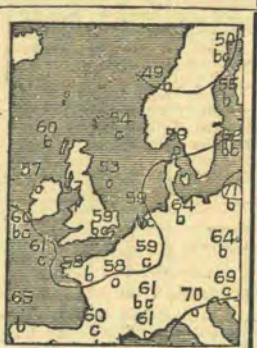
Temperature fallen slightly in most places. Readings uniform, varying between 55° and 63° over these Islands. Maxima about 70° over central England and at Roche's Point; between 55° and 65° elsewhere.

Wind varying considerably in direction, but generally southerly in the N.W. of France and on our S.W. coasts, westerly in the S.E. of England, and easterly in Scotland. Very light variable breezes prevailing during the day.

Sea rough round the Shetlands.

Barometer falling decidedly in W. France and slowly generally, but rising in the Netherlands and E. of France. Pressure still highest in the S.E. of France and lowest in Norway. Small depression appearing over Bay of Biscay and passing north-eastward. Barometer falling all day.





Thursday, June 24.

Weather dull over all the more northern parts of these Islands, with rain in Yorkshire, but sky clear or moderately so elsewhere. A good deal of fog and mist prevailing. Heavy thunder showers in our central and south-eastern districts later.

Temperature risen in W. France, changed irregularly elsewhere; readings varying between 53° and 61°. Maxima a little above 70° at Roche's Point and in London, between 60° and 70° elsewhere.

Wind light from the eastward over Scotland, moderate to strong from W. over France and the Channel, light and variable elsewhere: westerly wind spreading northward over us later.

Sea moderate to smooth.

Barometer rising over France and our more southern stations, falling elsewhere; area of high pressure over Spain, with low and uniform readings over these Islands and Scandinavia. Pressure increasing slowly during day.

Friday, June 25.

Weather fine over E. Scotland, cloudy or dull in nearly all other places; cloudy and showery all day in S.W., but fine elsewhere till evening. Sharp thunderstorm passing over London at 6 P.M.

Temperature risen a little, except in the S. and S.W.; readings ranging from 54° in the N.E. to 61° at Valentia, and 60° in London. Maxima exceeding 70° in London and at York, between 60° and 70° generally.

Wind southerly in the W. of France and on our S.W. coasts, westerly at our southern stations and over the Netherlands, and south-westerly at most Scandinavian stations. Calms and variable airs prevailing over the greater part of these Islands. Wind backing to E. in the S.W. later, and to N. in Ireland.

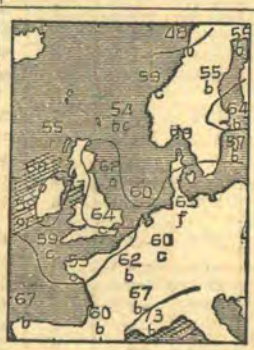
Sea rough near Scilly.

Barometer falling in the S.W. and over the Bay of Biscay, rising in most other places. Area of high pressure over S.E. France, with depression over Scandinavia, and small disturbance near Scilly. Barometer falling all day in S., and depression advancing from south-westward.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.



Weather during the 24 hours succeeding the date of the Charts.

Saturday, June 26.

Weather fine on many parts of our W., S., and S.E. coasts; dull, foggy, and misty elsewhere. Severe thunderstorm passing over central England in afternoon.

Temperature changes slight and irregular; readings ranging from 53° in the Shetlands to 61° in London. Maxima about 70° over central England.

Wind very light and variable over our southern districts, and the E. and N. of France, but light northerly breezes blowing in Ireland, and strong north-westerly winds on the eastern shores of the North Sea. Variable breezes reported over these Islands all day.

Sea rough round Ushant.

Barometer falling over France, rising elsewhere—briskly Ireland. Readings high on our western coasts, with large depression over the N. of Norway and smaller one over France. Pressure increasing slowly all day.

Sunday, June 27.

Weather rainy over Ireland and dull in the N.W. of France and W. of Scotland and Norway, fine and bright elsewhere. The rain and dull weather extending eastward later, but fine all day in S.E.

Temperature risen at nearly all stations; ranging over these Islands from 56° over central Ireland to 65° over central England. Maxima between 70° and 75° over central England, between 60° and 70° elsewhere.

Wind southerly on our western and northern coasts, but drawing into W. over England and into N.W. and N. over France. Blowing freshly on our extreme western coasts, lightly or moderately elsewhere. South-westerly and west-south-westerly winds on all coasts during the day, blowing strongly in W.

Sea rough off the W. of Ireland.

Barometer falling slightly on our extreme western coasts, rising briskly elsewhere. Large anticyclone over our S.W. coasts and the W. of France. Rather large depression appearing on our N.W. coasts during day, and barometer falling generally.

Monday, June 28.

Weather still fine in the E. of France and over Sweden, but dull elsewhere, with rain, mist, or fog at several stations. Sky clearing in S.E. subsequently and fine bright weather prevailing all day.

Temperature changes slight and irregular over the North Sea and our E. coast, but thermometer risen elsewhere. Readings ranging from 54° at Sumburgh Head to 66° at Nottingham. Maxima again between 70° and 75° over central England, and between 60° and 70° elsewhere.

Wind westerly on most of our coasts and in N. France, southerly and south-easterly over Scandinavia, but strong southerly breezes reported in W. Ireland. South-westerly and westerly winds prevailing all day.

Sea rough off the W. coast of Ireland and at Barrow-in-Furness.

Barometer falling briskly in the Shetlands and over Norway, rising elsewhere. Anticyclone still shown over France and the Channel, with large depression to the northward of Scotland. Pressure rising slightly in the N. in the evening but giving way briskly in the S.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	60	44	52·7	0·0	2	0·05	−0·24	*	*
	Stornoway	65	50	56·1	+1·6	2	0·70	+0·45	29	23
	Wick	65	43	55·3	+0·6	3	0·69	+0·29	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	65	53	58·7	−3·0	5	0·35	−0·21	*	*
	Jersey (Noirmont)	66	52	58·0	−3·7	2	0·26	−0·06	48	43

The above observations made in "Scotland N." and the "Channel Islands" are not included in the Summ[illegible] on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	72	47	59·7	+3·1	3	0·48	+0·08	*	*
	Aberdeen	73	46	58·5	+1·2	3	0·24	−0·16	?	?
	Glenalmond	73	42	58·1	+0·5	1	0·30	?	?	?
	Leith	69	49	58·8	+1·3	3	0·05	−0·43	*	*
2. ENGLAND, N.E.	Shields	69	49	56·4	−2·5	2	0·10	−0·30	*	*
	Durham	74	43	57·7	−1·8	3	0·18	−0·20	19	16
	York	74	50	60·5	+1·0	4	0·22	−0·33	18	15
	Spurn Head	69	51	57·9	−2·3	4	0·38	?	*	*
	Kelstern (Lincolnsh.) ℳ	70	46	58·9	−1·9	4	1·13	+0·65	31	26
3. ENGLAND, E.	Hillington ℳ	75	47	60·9	+0·2	3	0·36	+0·03	28	24
	Yarmouth	74	53	59·2	−1·5	3	0·55	+0·02	*	*
	Cambridge	75	47	60·9	−1·0	5	1·36	+0·87	26	22
	Rothamsted	73	44	60·0	−2·6	4	0·34	−0·22	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	75	47	60·5	+0·4	3	0·97	+0·41	*	*
	Nottingham	76	46	61·6	+0·3	4	3·00	+2·45	*	*
	Loughborough	75	47	61·6	+0·6	3	1·82	+1·22	*	*
	Leicester	72	48	60·4	−1·3	4	1·48	+0·89	?	?
	Birmingham (Oscott)	69	49	60·2	−1·1	4	1·22	+0·62	*	*
	Shrewsbury ℳ	72	45	59·1	−1·8	6	0·54	+0·14	*	*
	Churchstoke ℳ	69	45	58·3	−2·5	3	0·34	?	39	33
	Hereford ℳ	73	46	60·6	−0·3	4	0·76	+0·32	*	*
	Cirencester	72	43	59·5	−2·5	3	0·52	−0·07	41	35
	Oxford	70	48	60·5	−2·5	6	1·99	+1·48	?	?
5. ENGLAND, S.	London†	76	49	61·9	−0·8	4	1·08	+0·54	31	27
	Marlborough ℳ	72	45	59·4	−3·1	3	0·17	−0·28	*	*
	Strathfield Turgiss ℳ	73	45	59·7	−2·3	3	0·55	+0·09	*	*
	Dover	68	51	59·3	−1·7	2	0·62	+0·18	*	*
	Hastings (St. Leonard's)	65	50	58·3	−2·7	4	0·81	+0·48	*	*
	Southampton	73	47	59·5	−1·5	3	0·66	?	47	41
	Hurst Castle	65	50	57·9	−3·1	3	0·47	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	70	51	59·2	+3·1	6	2·01	?	*	*
	Glasgow	71	48	58·5	+1·3	4	0·99	+0·27	26	22
	Ardrossan	68	50	57·8	+0·5	4	0·67	+0·15	*	*
	Silloth (Cumberland)	73	48	59·4	+0·7	4	0·60	+0·14	23	19
	Douglas (Isle of Man)	69	45	57·3	−1·2	2	1·36	+0·96	29	25
7. ENGLAND, N.W.	Barrow-in-Furness	71	52	59·0	−0·6	5	0·50	?	*	*
	Stonyhurst	70	52	59·3	−0·4	4	1·70	+0·91	22	19
	Blackpool ℳ	65	49	57·7	−2·1	3	1·01	+0·49	*	*
	Manchester	69	48	58·7	−1·8	3	0·39	−0·29	*	*
	Liverpool Obsy (Bidston)	67	53	59·9	−0·5	3	0·18	−0·42	*	*
	Llandudno ℳ	69	52	60·0	+0·2	2	0·26	?	34	29
	Holyhead	66	53	58·9	−1·1	2	0·60	+0·24	*	*
8. ENGLAND, S.W.	Pembroke	64	52	57·6	−3·1	3	0·04	−0·35	61	53
	Barnstaple	72	54	64·5	+3·5	1	0·02	−0·51	*	*
	Falmouth	68	52	59·3	−2·5	2	0·28	−0·32	47	42
	Plymouth	70	53	60·6	−1·1	3	0·36	−0·05	*	*
	Prawle Point	66	51	57·1	−4·4	2	0·08	?	*	*
9. IRELAND, N.	Londonderry	70	48	58·5	0·0	6	0·76	+0·18	*	*
	Mullaghmore	67	51	59·5	0·0	5	1·18	?	*	*
	Markree Castle	70	44	57·6	−1·8	6	1·09	+0·39	37	31
	Brookeborough	69	45	57·5	−1·8	5	0·86	?	*	*
	Armagh	69	49	58·9	−0·1	5	1·58	+1·08	14	12
	Donaghadee	67	46	56·7	−2·2	3	0·20	?	*	*
10. IRELAND, S	Dublin	69	53	61·5	+1·7	5	0·49	−0·12	16	14
	Parsonstown	69	47	58·5	−0·8	6	1·08	+0·58	23	20
	Roche's Point	73	53	62·8	+2·3	5	0·14	−0·42	*	*
	Valentia	67	49	59·2	−0·7	5	0·63	−0·08	41	35
	Foynes	64	46	55·4	−4·5	3	0·66	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The Sunshine values for London are the means of observations made at Hampstead, Kew Observatory, and the London Institution, Finsbury Circus.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL;
AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 27.] WEEK ENDING MONDAY, JULY 5, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston); Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.)				Rainfall. (Amounts in tenths of an inch.)			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	72	41	57	1 below.	6	13	6 more.	28	23
	2. ENGLAND, N.E.	75	43	59	2 below.	3	2	2 less.	32	27
	3. ENGLAND, E.	79	44	61	2 below.	4	10	4 more.	40	35
	4. MID. COUNTIES	78	43	59	3 below.	4	5	0 (average).	36	32
	5. ENGLAND, S.	79	44	60	3 below.	3	4	1 more.	45	39
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	68	45	57	1 below.	6	11	5 more.	25	21
	7. ENGLAND, N.W.	68	48	58	3 below.	4	5	0 (average).	26	23
	8. ENGLAND, S.W.	75	49	60	2 below.	4	4	2 less.	45	40
	9. IRELAND, N.	71	49	58	2 below.	6	13	8 more.	25	21
	10. IRELAND, S.	70	48	60	1 below.	5	7	1 more.	39	29

General Remarks.

Weather again very unsettled generally, but finer at our southern and south-eastern stations than elsewhere. Rain very frequent, and heavy thunderstorms in many places on the 3rd.

Temperature below the mean in all districts, the deficit being greatest in the Midland Counties, "England, S.," and "England, N.W." At our more northern and eastern stations the highest readings were registered on the 29th or 30th June, but in the west and south the greatest warmth was at the close of the period. The lowest readings occurred *generally* on the 5th, but in some parts of our midland and eastern counties they were recorded on the 2nd or 3rd.

Rainfall a little less than the mean in "England, N.E.," and "England, S.W.," and about the mean in the Midland Counties and "England, N.W.," but more in all other districts. The excess most considerable in Scotland and "Ireland, N."

Bright sunshine a little less prevalent in Scotland and the north-west of England than during last week, but rather more frequent elsewhere. The percentage of possible duration as low as 21 to 23 in the northern and north-western districts, and only 40 in "England, S.W.,"

Wind moderate throughout—from W. or S.W. at the English and Irish stations and from E. over Scotland until the 4th, when it shifted to N. or N.W. very generally. South-westerly breezes again setting in in the west on the 5th. Decided sea-breeze shown at all the east coast stations on the afternoon of the 5th.

Q 2099. 100.—7/80. Wt. 26. E. & S.

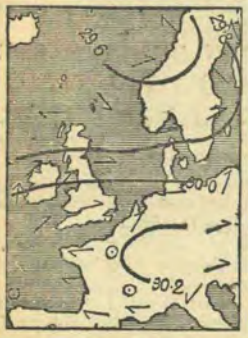
II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending July 5, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.



Tuesday, June 29.

Weather dull and cloudy at all but our south-eastern stations and in France, with rain in the W. and N. Rainfall heavy (0·8 in.) in several parts of Scotland.

Temperature not changed much; highest over the eastern and lowest over the western parts of the Kingdom. Maxima as high as 75° to 79° over our midland and south-eastern counties, but not much above 60° in Ireland, and below 60° in the N. of Scotland.

Wind fresh southerly in Ireland, westerly and south-westerly in England and Scotland; afterwards shifting to eastward in the N., but remaining light or moderate.

Sea rather rough in the W. and N., slight or smooth elsewhere.

Barometer highest (30·2 ins.) over France, lowest (29·6 ins.) west of Norway. Depression to westward of Scotland, moving slowly eastwards, and barometer falling generally.

Wednesday, June 30.

Weather dull and showery everywhere, but rain heavier in Scotland and W. of Ireland than elsewhere. No change during day.

Temperature fallen in the N., still highest in the N.E. and E., lowest in W. Maxima varying from 73° and 75° over England and 79° in London; 60° to 65° in Ireland. Air close.

Wind easterly at the Scotch stations, south-westerly to westerly over England and Ireland, and light to moderate in force generally.

Sea gone down in the W., still slight or smooth elsewhere.

Barometer still highest in S., lowest in N., but gradients slight. Depression over Scotland, moving eastwards very slowly; another very shallow one over France.

Thursday, July 1.

Weather still dull and showery generally over Ireland and England, with local thunderstorms in many places; inclined to improve in Scotland later.

Temperature lower generally than on 30th June, the maximum readings being below 70° in all parts of the kingdom.

Wind drawing into W. over England, and N.W. in Ireland, but remaining moderate in force. The easterly breeze in Scotland falling light and backing northwards.

Sea moderate to smooth.

Barometer rather lower than on 30th, and its motion slight and irregular. Depression in N., moving slowly eastwards during day.

Friday, July 2.

Weather at first finer than of late in the northern and eastern districts, but dull, gloomy, and wet again in the W., and subsequently in the N. and E. also.

Temperature risen slightly; a maximum of 74° recorded at Cambridge, and 67° to 68° over other inland parts of England; uniformly low in Ireland and Scotland.

Wind back again to the south-westward over Ireland and England, and blowing freshly in the W. Easterly and south-easterly winds appearing in Scotland.

Sea again rough off the W. of Ireland, but little disturbed elsewhere.

Barometer still highest in France, lowest over W. of Norway; risen in E. and S., but new depression coming towards our N.W. coasts from westward.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, July 3.

Weather dull, squally, and showery everywhere, with thunderstorms in many places and some heavy showers locally. Improving in W. later.

Temperature showing no important change; still very low generally for the season, but air close and stuffy at times.

Wind easterly in Scotland, northerly in Ireland, westerly in England, and southerly over the North Sea. The northerly wind in the W. spreading very gradually over the Kingdom, with cooler weather.

Sea rough in the Channel, moderate or slight elsewhere.

Barometer beginning to rise in far N., falling elsewhere. The new depression over Scotland very well defined, but moving eastwards extremely slowly. Subsidiary depressions over England.

Sunday, July 4.

Weather much finer than of late except over our extreme eastern and south-eastern counties, where squalls and showers continued till night.

Temperature fallen several degrees in E., little changed in other places. Maxima of 70° to 75° recorded at some extreme southern stations, 71° at Cambridge, and 68° at Parsonstown; several degrees lower elsewhere, and even 57° to 58° in N.E. Succeeding night cold.

Wind round to N. or N.W. all over the kingdom, and blowing strongly on our N.E. coasts. Very little change during day.

Sea rather rough in the N.E.

Barometer rising generally—quickly in the E. Depression of 3rd now off the Dutch coast and moving irregularly.

Monday, July 5.

Weather fine over Great Britain, dull in Ireland and the Hebrides, with rain later on at some of the extreme western stations. Sky cloudy in S.E. at evening.

Temperature rising generally. Maxima of 70° to 72° recorded in several parts of England and at Leith.

Wind north-westerly and variable at the English stations, south-westerly to westerly in Ireland, and southerly at Stornoway; light to moderate in force everywhere. A sea breeze all along E. coasts in afternoon.

Sea very little disturbed.

Barometer falling again a little in W., steady elsewhere after a brisk rise in E. Pressure highest off our S.W. coasts, and gradients (for W. to S.W. winds) slight.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟹ = a heavy gale; ⟹ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	59	44	51·7	−1·5	0	—	−0·29	*	*
	Stornoway	62	50	55·4	+2·5	3	0·17	−0·08	37	30
	Wick	65	40	53·4	−1·8	4	0·55	+0·15	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	65	54	59·2	−3·2	5	0·20	−0·36	*	*
	Jersey (Noirmont)	75	51	59·5	−2·9	4	0·69	+0·34	58	52

The above observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	67	44	56·4	−0·9	7	0 83	+0·40	*	*
	Aberdeen	70	46	56·8	−1·0	6	1·67	+1·22	28	23
	Glenalmond	67	41	55·6	−2·5	6	1·94	?	?	?
	Leith	72	48	60·2	+2·2	6	0·74	+0·23	*	*
2. ENGLAND, N.E.	Shields	69	47	58·8	−0·7	6	0·53	+0·12	*	*
	Durham	75	44	58·5	−1·5	2	0·10	−0·41	25	21
	York	68	45	58·8	−1·4	3	0·25	−0·29	?	?
	Spurn Head	72	51	60·2	−0·4	0	—	?	*	*
	Kelstern (Lincolnsh.) ℳ	73	43	57·9	−3·3	4	0·18	−0·37	38	33
3. ENGLAND, E.	Hillington ℳ	77	44	59·9	−2·1	4	1·29	+0·51	42	36
	Yarmouth	73	47	60·7	−0·8	4	0·95	+0·48	*	*
	Cambridge	79	46	61·4	−0·2	5	1·05	+0·55	38	33
	Rothamsted	76	46	59·8	−3·6	4	0·73	+0·13	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	75	46	60·0	−0·6	4	0·47	−0·19	*	*
	Nottingham	78	45	60·9	−1·1	3	0·33	−0·23	*	*
	Loughborough	75	49	60·0	−1·8	3	0·15	−0·41	*	*
	Leicester	73	47	58·6	−4·0	4	0·42	−0·15	?	?
	Birmingham (Oscott)	73	46	58·3	−3·7	4	0·45	−0·16	*	*
	Shrewsbury ℳ	69	45	58·0	−3·5	4	0·90	+0·50	*	*
	Churchstoke ℳ	66	43	57·3	−3·9	2	0·40	?	37	32
	Hereford ℳ	73	46	59·1	−2·5	4	0·27	−0·22	*	*
	Cirencester	71	45	58·5	−4·4	5	1·51	+0·91	35	31
	Oxford	71	47	59·7	−4·0	4	0·54	0·00	?	?
5. ENGLAND, S.	London†	79	47	61·7	−1·8	4	0·89	+0·35	40	35
	Marlborough ℳ	74	44	59·5	−3·8	4	0·50	+0·01	*	*
	Strathfield Turgiss ℳ	76	44	60·8	−2·7	4	0·58	+0·08	*	*
	Dover	69	51	59·7	−2·3	4	0·45	0·00	*	*
	Hastings (St. Leonard's)	67	49	58·4	−3·5	3	0·31	−0·04	*	*
	Southampton	74	47	60·2	−1·8	3	0·26	?	49	43
	Hurst Castle	71	51	59·1	−2·7	2	0·09	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	63	45	56·0	−0·6	6	1·60	?	*	*
	Glasgow	67	46	58·5	+0·5	5	1·27	+0·49	27	23
	Ardrossan	64	49	57·2	−0·8	6	1·36	+0·81	*	*
	Silloth (Cumberland)	68	47	58·7	−0·8	6	1·14	+0·65	22	19
	Douglas (Isle of Man)	64	49	56·8	−2·2	5	0·28	−0·16	25	21
7. ENGLAND, N.W.	Barrow-in-Furness	68	52	58·4	−1·6	4	0·22	?	*	*
	Stonyhurst	66	49	57·5	−3·1	6	1·52	+0·69	22	19
	Blackpool ℳ	64	54	58·4	−2·0	4	0·42	−0·18	*	*
	Manchester	64	48	56·1	−4·9	4	0·51	−0·19	*	*
	Liverpool Obsy (Bidston)	67	53	58·6	−2·2	3	0·25	−0·45	?	?
	Llandudno ℳ	67	52	59·1	−1·8	2	0·50	?	30	26
	Holyhead	65	52	58·0	−2·5	5	0·26	−0·09	*	*
8. ENGLAND, S.W.	Pembroke	62	52	56·9	−4·6	5	0·20	−0·20	37	32
	Barnstaple	72	49	62·2	+0·2	4	0·54	−0·06	*	*
	Falmouth	67	53	60·1	−2·0	6	0·37	−0·23	53	47
	Plymouth	73	52	61·3	−0·7	3	0·25	−0·25	*	*
	Prawle Point	75	51	58·1	−3·8	2	0·41	?	*	*
9. IRELAND, N.	Londonderry	66	50	57·8	−1·2	7	2·40	+1·87	*	*
	Mullaghmore	71	51	58·9	−1·1	7	1·87	?	*	*
	Markree Castle	66	49	57·5	−2·4	6	0·75	+0·10	22	19
	Brookeborough	65	50	57·8	−2·0	6	0·93	?	*	*
	Armagh	65	51	58·0	−1·7	6	0·91	+0·35	27	23
	Donaghadee	67	49	58·9	−0·5	5	0·79	?	*	*
10. IRELAND, S	Dublin	69	52	60·9	+0·6	5	0·66	+0·07	31	27
	Parsonstown	68	48	58·7	−1·3	6	0·44	−0·15	30	26
	Roche's Point	70	51	61·1	+0·1	5	0·87	+0·29	*	*
	Valentia	65	53	59·3	−1·2	4	0·93	+0·16	38	33
	Foynes	64	52	58·0	−2·5	5	0·61	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The Sunshine values for London are the means of observations made at Hampstead, Kew Observatory, and the London Institution, Finsbury Circus.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 28.] WEEK ENDING MONDAY, JULY 12, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.)				Rainfall. (Amounts in tenths of an inch.)			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	72	45	57	1 below.	6	14	9 more.	30	25
	2. ENGLAND, N.E.	73	43	59	2 below.	5	11	6 more.	32	27
	3. ENGLAND, E.	75	43	59	4 below.	6	8	3 more.	39	34
	4. MID. COUNTIES	74	45	58	4 below.	6	15	10 more.	34	30
	5. ENGLAND, S.	71	46	59	4 below.	5	6	1 more.	38	34
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	69	45	57	1 below.	3	7	0 (average).	42	35
	7. ENGLAND, N.W.	69	44	58	3 below.	5	11	6 more.	36	31
	8. ENGLAND, S.W.	72	50	59	3 below.	5	12	8 more.	40	35
	9. IRELAND, N.	68	47	57	3 below.	6	9	4 more.	23	20
	10. IRELAND, S.	67	48	58	3 below.	6	12	8 more.	28	25

General Remarks.

Weather cloudy, showery, and very unsettled. Frequent thunderstorms reported from almost all parts of the Kingdom, with extremely heavy showers of rain and hail.

Temperature below the mean for the time of year in all districts, the deficit ranging from one degree in Scotland to four degrees in "England, E.," the Midland Counties, and "England, S." Readings highest during latter half of week, but maxima seldom exceeding 70° even at our central and southern stations. Minima also low for the season.

Rainfall more than the mean in all districts excepting "Scotland, W." The excess not very large in "England, E.," or "England, S.," but considerable in all other districts, especially the Midland Counties, where the total fall amounted to three times as much as the mean. At Barnstaple the aggregate fall was 3·23 ins., or nearly half an inch more than the mean for the whole month of July. The heaviest amounts measured in one day were 0·90 in. at Dublin on the 12th, 0·94 in. at Kelstern on the 7th, 1·31 in. at Shrewsbury on the 12th, and 1·79 in. at Barnstaple on the 9th.

Bright sunshine showing a slight increase over that of last week in Scotland and the north-west of England, but a falling off in most other districts. The percentage of possible duration varying from 20 in "Ireland, N." to 34 in "England, E. and S.," and 35 in "Scotland, W.," and "England, N.W."

Wind at first moderate or fresh from the south-westward generally, but veering to N.W. on our western coasts on the 7th, and to N. over Scotland on the 9th. Very light breezes prevailing during remainder of week,—from N.W. or N. in the north and west, and from W. or S.W. in the east and south.

Q 2194. 100.—7/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE during the Week ending July 12, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, July 6.

Weather fine and bright over France, dull, unsettled, and rainy over our Islands, especially in the W. and N.

Temperature low everywhere for the time of year; the morning readings being below 60° at all but our south-eastern stations, and the maxima below 67° in all places excepting London.

Wind chiefly westerly to south-westerly, but varying to N.W. on several parts of our northern coasts, and to E. at Stornoway. Light to moderate in force everywhere.

Sea rather rough on the eastern side of the Irish Sea, moderate to smooth everywhere.

Barometer highest over France, lowest over our northern stations and the North Sea; some subsidiary depressions crossing our Islands from the westward later on.

Wednesday, July 7.

Weather still very changeable, with showers of rain generally, and thunderstorms in the N. and N.E. The dull weather now prevailing over France also.

Temperature showing no important change; still very low generally; the maxima being again all below 68°.

Wind very variable, between S.W. and N.W. over Ireland and England, but becoming north-easterly and easterly in Scotland; still light to moderate in force.

Sea moderate to smooth, except on the Lancashire coast.

Barometer still highest over France. Depression in N. becoming very irregular in shape, and many subsidiary disturbances appearing over Ireland and England.

Thursday, July 8.

Weather fair along our S. and S.E. coasts, dull and very wet in the W. and N. and afterwards at our Midland stations also, with thunderstorms in many places.

Temperature unchanged at 8 a.m. The maxima as high as 69° at one or two English stations, but scarcely above 60° in the N.

Wind very light from N.E. in the N., moderate northerly and north-westerly in Ireland, westerly in the S., and southerly over the North Sea.

Sea moderate to smooth.

Barometer showing hardly any change. Depression in the N. less irregular than of late, but subsidiary disturbances appearing during the day.

Friday, July 9.

Weather finer than of late, but intermittent showers with bright intervals felt during the day in almost all places.

Temperature remaining low generally. A maximum of 71° recorded at Nottingham, but nothing above 68° at any other station, and in most places not above 65°.

Wind still northerly in the W., westerly in the S., south-westerly to southerly in the E., and north-easterly in Scotland; light to moderate in force.

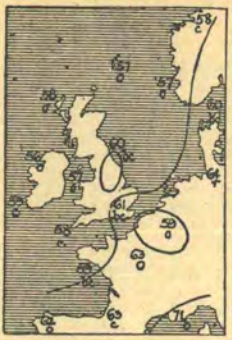
Sea moderate in the W. and S., smooth in the E.

Barometer still showing little change; highest in far S., lowest in N., with subsidiary depressions over Ireland and England.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.



Saturday, July 10.

Weather still very showery and changeable, except in the S.W.; with heavy thunderstorms over England, especially over our northern and eastern counties.

Temperature very little changed, but slightly higher than on 9th, the maxima reported being 73° at Nottingham, 70° at Spurn Head and Cambridge.

Wind light to moderate generally. South-westerly and southerly in the E., north-westerly in the W., northerly in Scotland.

Sea very little disturbed.

Barometer inclined to rise generally. Depression in N. and subsidiary disturbance over England still continuing.

Sunday, July 11.

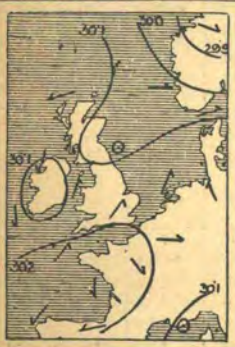
Weather rather finer on the whole than of late, but heavy showers still prevailing in many places, with bright intervals.

Temperature slightly higher than on 10th. Maxima between 70° and 73° over our inland counties. Temperature, nevertheless, still lower than mean for time of year.

Wind moderate generally; northerly in Scotland, north-westerly in Ireland, westerly over England.

Sea slight or smooth generally.

Barometer risen somewhat decidedly. Depression lately observed suddenly travelled away to eastward, and at 8 a.m. lay over S. of Norway.



Monday, July 12.

Weather finer than of late over England, dull and showery again in W. and N.W.

Temperature unsteady, but not changing much; maximum of 74° at Nottingham and 70° in London, 63° to 68° in other places.

Wind very light generally; back to W. and S.W. on our S.W. coasts, while north-easterly breezes appeared in N.W.

Sea smooth.

Barometer inclined to fall again. New shallow depression appearing over Ireland and travelling very slowly indeed.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	61	43	53·9	+0·3	4	0·69	+0·40	*	*
	Stornoway	61	49	55·1	−0·3	5	0·39	−0·34	20	16
	Wick	65	49	56·8	+1·0	5	0·94	+0·54	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	65	54	59·2	−3·7	5	0·69	+0·14	*	*
	Jersey (Noirmont)	65	52	58·5	−4·8	3	0·37	−0·02	63	57

The above observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	66	50	57·2	−0·7	6	1·78	+1·28	*	*
	Aberdeen	68	45	57·5	−0·7	6	1·40	+0·88	33	28
	Glenalmond	67	45	56·2	−2·4	6	1·54	?	26	22
	Leith	72	45	58·2	−0·2	6	0·96	+0·42	*	*
2. ENGLAND, N.E.	Shields	67	48	58·5	−1·3	6	1·00	+0·53	*	*
	Durham	73	43	59·0	−0·7	5	1·05	+0·51	36	31
	York	70	50	59·1	−1·8	5	0·87	+0·35	26	22
	Spurn Head	66	51	59·4	−1·6	5	1·33	?	*	*
	Kelstern (Lincolnsh.) ℳ	69	46	57·8	−3·8	6	1·45	+0·97	32	28
3. ENGLAND, E.	Hillington ℳ	71	43	58·2	−4·6	7	0·78	+0·33	38	33
	Yarmouth	68	50	59·1	−3·1	6	1·00	+0·43	*	*
	Cambridge	73	47	59·2	−4·2	5	0·28	−0·24	39	35
	Rothamsted	75	47	59·3	−4·7	6	1·23	+0·63	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	69	48	58·7	−2·4	7	1·80	+1·20	*	*
	Nottingham	74	46	60·1	−2·5	6	1·19	+0·59	*	*
	Loughborough	70	47	59·3	−2·9	5	1·05	+0·50	*	*
	Leicester	68	48	58·0	−5·3	7	1·65	+1·05	32	28
	Birmingham (Oscott)	69	47	58·0	−4·5	7	1·08	+0·46	*	*
	Shrewsbury ℳ	68	46	57·2	−4·8	7	2·85	+2·28	*	*
	Churchstoke ℳ	66	45	56·5	−5·8	6	1·08	?	33	29
	Hereford ℳ	71	47	59·1	−3·1	7	2·05	+1·52	*	*
	Cirencester	68	46	57·8	−5·6	6	1·09	+0·48	35	31
	Oxford	68	49	58·3	−5·9	6	1·32	+0·77	35	31
5. ENGLAND, S.	London†	71	50	59·6	−4·6	6	0·59	+0·04	33	29
	Marlborough ℳ	71	48	58·4	−5·6	6	0·84	+0·34	*	*
	Strathfield Turgiss ℳ	70	46	59·3	−3·7	6	0·55	+0·05	*	*
	Dover	66	54	60·0	−2·6	3	0·60	+0·15	*	*
	Hastings (St. Leonard's)	65	52	58·4	−4·0	3	0·40	+0·03	*	*
	Southampton	70	50	59·6	−3·4	5	0·93	?	42	38
	Hurst Castle	64	56	59·9	−2·3	5	0·36	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	64	46	56·3	−0·7	2	0·88	?	*	*
	Glasgow	68	45	57·3	−1·2	4	0·77	−0·04	45	38
	Ardrossan	67	48	58·4	−0·1	3	0·48	−0·10	*	*
	Silloth (Cumberland)	69	49	59·2	−0·7	5	0·59	+0·07	38	32
	Douglas (Isle of Man)	65	45	55·8	−3·7	3	0·67	+0·18	42	36
7. ENGLAND, N.W.	Barrow-in-Furness	69	51	58·6	−1·9	4	0·26	?	*	*
	Stonyhurst	68	50	57·4	−3·8	6	2·33	+1·44	41	35
	Blackpool ℳ	65	44	57·6	−3·3	4	0·51	−0·17	*	*
	Manchester	67	47	56·9	−4·3	5	1·60	+0·88	*	*
	Liverpool Obsy (Bidston)	68	50	58·4	−2·9	6	1·10	+0·30	*	*
	Llandudno ℳ	67	49	58·4	−3·1	6	1·07	?	30	26
	Holyhead	65	52	57·5	−3·5	6	0·88	+0·53	*	*
8. ENGLAND, S.W.	Pembroke	62	53	57·0	−5·0	2	0·80	+0·35	41	36
	Barnstaple	72	50	61·3	−1·3	6	3·23	+2·54	*	*
	Falmouth	65	53	58·9	−3·7	6	0·55	−0·05	38	34
	Plymouth	68	51	59·9	−2·8	6	0·95	+0·39	*	*
	Prawle Point	65	51	57·6	−4·4	5	0·29	?	*	*
9. IRELAND, N.	Londonderry	67	49	57·0	−2·5	5	0·74	+0·03	*	*
	Mullaghmore	64	50	57·6	−2·6	6	0·61	?	*	*
	Markree Castle	66	48	57·0	−3·2	4	1·06	+0·44	29	26
	Brookeborough	65	50	56·5	−3·6	7	0·65	?	*	*
	Armagh	64	49	56·1	−4·1	7	1·51	+0·82	16	14
	Donaghadee	68	47	56·1	−3·4	6	0·66	?	*	*
10. IRELAND, S	Dublin	67	52	58·6	−2·2	7	1·78	+1·22	21	18
	Parsonstown	64	48	57·2	−3·3	7	2·09	+1·49	23	20
	Roche's Point	66	51	58·7	−2·3	6	0·77	+0·17	*	*
	Valentia	64	51	58·2	−2·8	5	1·08	+0·26	41	36
	Foynes	64	50	56·9	−4·1	4	0·27	?	?	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The Sunshine values for London are the means of observations made at Hampstead, Kew Observatory, and the London Institution, Finsbury Circus.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 29.] WEEK ENDING MONDAY, JULY 19, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	74	43	58	0 (average).	3	4	3 less.	34	28
	2. ENGLAND, N.E.	73	51	59	2 below.	6	18	14 more.	9	8
	3. ENGLAND, E.	74	49	63	1 below.	5	9	3 more.	36	27
	4. MID. COUNTIES	77	44	62	1 below.	5	20	15 more.	37	33
	5. ENGLAND, S.	79	46	64	0 (average).	5	8	3 more.	31	28
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	75	47	59	0 (average).	4	11	6 more.	26	23
	7. ENGLAND, N.W.	75	50	60	1 below.	5	16	7 more.	17	15
	8. ENGLAND, S.W.	78	47	62	1 below.	2	4	2 less.	68	61
	9. IRELAND, N.	74	45	58	2 below.	4	7	0 (average).	30	26
	10. IRELAND, S.	76	49	60	1 below.	4	18	11 more.	35	31

General Remarks.

Weather was rather fine in the E. of Scotland and S.W. of England, but elsewhere dull, unsettled, and very showery. Severe and frequent thunderstorms were experienced over England and Ireland, accompanied in some places by heavy hail.

Temperature was about equal to the mean for the time of year over Scotland and in "England, S.," but slightly below it in all other parts of the country. The thermometer was generally lowest (about 45°) during the early morning of the 16th, but as the day advanced temperature rose rapidly, and at Strathfield Turgiss and Southampton maxima of 79° were registered; at most other stations the highest readings during the week ranged from 74° to 77°.

Rainfall was less than the mean in "Scotland, E.," and "England, S.W.," and about the average in "Ireland, N.," but in all other districts the fall was more than the mean. In the central and northern parts of England and in the S. of Ireland (owing to the thunderstorms noted above) the excess was very considerable.

Bright sunshine was rather more continuous in Ireland, south-western and central England, and E. of Scotland than during last week, but in all other parts of the Kingdom was much less prevalent. The percentage of total possible duration was greatest (61) in "England, S.W.," and least in "England, N.E.," where it was only 8.

Wind light and rather variable in direction, but generally north-easterly or easterly during the first five days. On the 18th and 19th, however, a south-westerly or westerly breeze was blowing on all except our most northern coasts.

Q 2310. 100.—7/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending July 19, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, July 13.

Weather fine over France and the countries to the eastward of the North Sea; dull and unsettled over the British Isles, rain in some places. Dull most of day, but clearing towards evening.

Temperature risen slightly in the N. and over Scandinavia, fallen in most other places. Readings ranging from 53° at Stornoway to 62° in London. Maxima between 60° and 65° generally, but 69° in London and 72° at Nottingham.

Wind light or moderate; from E. in Scotland, from N. in Ireland, from W. in the Channel, and from S.W. and S. over England. No change during day.

Sea slight or smooth generally.

Barometer falling over the W. and S.W. of England, rising elsewhere, shallow depression over Wales. Pressure decreasing slowly during day, and depression passing slowly eastward.

Wednesday, July 14.

Weather still fine in E. France, Denmark, and Sweden, but cloudy or dull elsewhere, with rain in some places and thunder at Spurn Head and Rochefort. Unsettled and rainy in most places all day, sharp thunderstorm in London.

Temperature changed little and irregularly; readings ranging from 54° in the Shetlands to 61° in the S.E. of England. Maxima again between 60° and 65° generally, but 73° in London.

Wind north-easterly and northerly over nearly the whole Kingdom; moderate in force in the W. and N., very light in the S.E. and S. Wind rising a little during day and becoming more easterly.

Sea moderate to smooth.

Barometer rising slowly in the N. and over Scandinavia, falling a little elsewhere. Area of high pressure to the northward of Scotland, with large shallow depression over England and France. Pressure decreasing during day.

Thursday, July 15.

Weather fine over the greater part of France, Denmark, the S. of Scandinavia, and the N. of Scotland, rainy and dull elsewhere with thunder and lightning. Weather clearing considerably later, fine evening.

Temperature risen a little in most places; readings ranging from 54° in the Shetlands, to 63° in London and 78° at Toulon. Maxima higher than of late, between 70° and 75° at our inland stations.

Wind easterly on nearly all coasts, but northerly in Ireland; blowing freshly in the N.W. Light south-westerly breeze appearing in the S. later and spreading eastward up the Channel during the day.

Sea rough round the N. coasts of Ireland and at the mouth of the Humber.

Barometer beginning to rise over France but falling in all other places; slightly over the British Isles, briskly in the N. of Scandinavia. Area of high readings still shown over Scotland, with large depression in the S. and over France. Recovery taking place in the S. later.

Friday, July 16.

Weather clearing considerably on our S.W. and W. coasts, and sky still clear in N. Scotland, Denmark, and E. France, cloudy or dull elsewhere. Weather fine greater part of day in most places. Thunderstorms occurring in the S. during the day.

Temperature risen slightly except in Scandinavia. Readings ranging from 54° at Nairn to 67° at Prawle Point. Maxima again moderately high, exceeding 70° at most of our more southern and central stations.

Wind varying a good deal in direction, but generally easterly over France, England, and Ireland. Light in force in most places, and calms prevailing in Scotland. Fresh southerly breeze springing up in W. Ireland later.

Sea slight except at Valentia.

Barometer rising over the greater part of western Europe, but falling at some French and Scandinavian stations. Readings very uniform generally, but rather higher over the north of these Islands and the North Sea than elsewhere. No change later.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, July 17.

Weather again fine over France and the countries to the eastward of the North Sea as well as at several Irish stations, cloudy or dull elsewhere with mist and drizzling rain. Rather unsettled during day, with thunderstorms in the S.

Temperature changes slight and irregular. Readings ranging from 54° at Wick to 69° at Prawle Point. Maxima between 70° and 75° at our inland and southern stations and between 65° and 70° in most other places.

Wind light in force on nearly all coasts, and rather variable in direction, but generally westerly in Scotland and easterly over Ireland and England. Light variable breezes all day.

Sea nearly smooth.

Barometer rising a little over France but falling slowly in all other places. Readings very uniform over the whole of western Europe, though rather higher over the Bay of Biscay and lower over Scandinavia than elsewhere. Barometer falling all day.

Sunday, July 18.

Weather again fine over France and the Netherlands, and fine weather apparently spreading to our S. coast also, but dull and rainy in all the more northern districts. Cloudy and unsettled all day.

Temperature fallen a few degrees except in the S.E. of England; readings ranging from 55° in the Shetlands to 64° at Dover and Scilly. Maxima rather lower than of late, only exceeding 70° at Nottingham and in the S.E. of England.

Wind continuing light on nearly all coasts, blowing from N.E. in the N.W., from S.W. and S. on most of our other coasts, and from W. and N.W. over France. No change during day, but wind increasing a little in force.

Sea slight or smooth.

Barometer rising slightly in France, N. Germany, and the N. of Sweden, falling elsewhere. Pressure highest over the Bay of Biscay, with a large area of low readings over the N. of these Islands and S. of Scandinavia. Pressure increasing a little in the evening.

Monday, July 19.

Weather cloudy or dull except over France, with showers at some northern stations. Sky clearing considerably in the W. and S.W. later, but cloudy all day in the E. A little rain falling in the E.

Temperature fallen a little in the N., changed irregularly elsewhere; readings ranging from 53° at Wick to 63° in London. Maxima exceeding 70° at Nottingham, Roche's Point, and in the S.E. of England, between 60° and 70° elsewhere.

Wind northerly over Ireland and Scotland, westerly to southwesterly over England, the Channel, and the North Sea. Moderate in force on most coasts. Little change during the day.

Sea rough round the Hebrides, moderate to smooth on our other coasts.

Barometer rising at nearly all stations. Anticyclone over France, and large depression over Scandinavia, and small disturbance over the S. of Scotland. Barometer rising slowly in all districts during day.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟩⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	62	46	53·7	−0·1	5	0·22	−0·06	*	*
	Stornoway	64	45	54·0	−1·7	0	—	−0·22	30	25
	Wick	67	47	56·3	+0·3	2	0·05	−0·35	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	69	54	61·3	−1·9	1	0·02	−0·53	*	*
	Jersey (Noirmont)	75	54	62·5	−0·3	1	0·05	−0·35	53	49

The above observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	72	43	57·5	−0·5	2	0·10	−0·45	*	*
	Aberdeen	69	49	58·6	+0·1	2	0·04	−0·56	35	29
	Glenalmond	74	48	58·3	−0·4	5	0·74	?	32	27
	Leith	67	50	57·8	−0·8	4	0·59	+0·02	*	*
2. ENGLAND, N.E.	Shields	65	51	56·4	−3·4	6	1·20	+0·69	*	*
	Durham	73	51	58·1	−2·3	6	1·82	+1·26	6	5
	York	67	52	59·4	−1·6	6	2·04	+1·55	8	7
	Spurn Head	70	55	59·2	−2·0	5	1·34	?	*	*
	Kelstern (Lincolnsh.) ℳ	70	52	59·5	−2·1	5	2·36	+1·88	13	12
3. ENGLAND, E.	Hillington ℳ	77	49	62·7	+0·4	5	1·64	+0·97	30	27
	Yarmouth	73	55	62·2	−0·5	4	0·38	−0·19	*	*
	Cambridge	74	52	63·1	−0·8	6	0·88	+0·36	30	27
	Rothamsted	72	52	62·6	−2·0	6	0·83	+0·22	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	72	51	61·0	−0·5	6	2·09	+1·48	*	*
	Nottingham	77	51	63·6	+0·8	7	1·93	+1·33	*	*
	Loughborough	74	52	63·4	+0·9	5	1·82	+1·32	*	*
	Leicester	71	54	62·0	−1·5	5	2·61	+2·01	28	25
	Birmingham (Oscott)	72	53	61·5	−1·1	4	1·27	+0·66	*	*
	Shrewsbury ℳ	75	50	61·7	−0·4	6	2·29	+1·74	*	*
	Churchstoke ℳ	72	44	59·7	−2·8	5	1·79	?	50	44
	Hereford ℳ	74	46	61·9	−0·8	4	1·33	+0·78	*	*
	Cirencester	74	48	62·4	−1·2	4	2·05	+1·44	41	37
	Oxford	71	52	61·6	−2·8	6	2·83	+2·28		
5. ENGLAND, S.	London†	75	54	64·7	+0·2	5	0·22	−0·33	25	23
	Marlborough ℳ	75	47	63·2	−1·0	4	0·82	+0·27	*	*
	Strathfield Turgiss ℳ	79	46	62·8	−0·7	6	1·61	+1·09	*	*
	Dover	74	55	63·5	+0·6	5	0·54	+0·09	*	*
	Hastings (St. Leonard's)	76	56	63·6	+0·8	5	0·84	+0·44	*	*
	Southampton	79	47	63·7	+0·7	4	0·92	?	37	33
	Hurst Castle	73	52	63·0	+0·2	5	0·96	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	69	47	57·7	+0·3	3	0·27	?	*	*
	Glasgow	73	51	58·7	+0·1	4	0·88	+0·03	28	24
	Ardrossan	70	52	59·1	+0·6	3	0·29	−0·35	*	*
	Silloth (Cumberland)	75	52	59·7	−0·3	6	2·51	+1·95	22	19
	Douglas (Isle of Man)	71	52	59·2	−0·7	5	1·40	+0·87	28	25
7. ENGLAND, N.W.	Barrow-in-Furness	74	53	61·1	+0·6	5	1·30	?	*	*
	Stonyhurst	75	54	60·4	−1·1	6	1·27	+0·35	17	15
	Blackpool ℳ	72	51	59·9	−1·1	4	0·79	+0·09	*	*
	Manchester	73	52	60·0	−1·5	6	1·37	+0·62	*	*
	Liverpool Obsr (Bidston)	73	50	60·5	−1·1	5	2·00	+1·06	*	*
	Llandudno ℳ	72	52	59·9	−0·5	4	2·86	?	?	?
	Holyhead	65	53	58·9	−2·2	6	1·79	+1·44	*	*
8. ENGLAND, S.W.	Pembroke	68	53	59·3	−2·9	2	0·29	−0·21	83	74
	Barnstaple	78	47	66·0	+3·0	3	1·28	+0·56	*	*
	Falmouth	70	51	61·5	−1·5	1	0·05	−0·56	53	48
	Plymouth	72	47	61·3	−1·5	1	0·02	−0·61	*	*
	Prawle Point	72	49	60·2	−2·1	3	0·13	?	*	*
9. IRELAND, N.	Londonderry	70	47	58·4	−1·7	4	0·51	−0·24	*	*
	Mullaghmore	70	54	59·9	−0·3	2	0·35	?	*	*
	Markree Castle	72	45	57·7	−2·7	3	0·39	−0·22	37	32
	Brookeborough	74	46	58·2	−2·3	4	0·97	?	*	*
	Armagh	69	50	58·5	−2·0	4	1·16	+0·45	23	20
	Donaghadee	65	48	57·2	−2·4	4	0·91	?	*	*
10. IRELAND, S	Dublin	67	50	58·6	−2·4	5	2·30	+1·75	31	27
	Parsonstown	74	49	59·8	−0·9	5	3·12	+2·47	35	31
	Roche's Point	76	51	62·4	+1·4	2	1·04	+0·39	*	*
	Valentia	67	52	59·5	−1·6	4	0·62	−0·24	39	35
	Foynes	70	49	58·6	−2·7	5	2·06	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.
† The Sunshine values for London are the means of observations made at Hampstead, Kew Observatory, and the London Institution, Finsbury Circus.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 30.] WEEK ENDING MONDAY, JULY 26, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	75	40	58	1 below.	2	4	2 less.	53	46
	2. ENGLAND, N.E.	76	47	59	2 below.	3	8	4 more.	30	26
	3. ENGLAND, E.	79	45	62	1 below.	5	13	7 more.	37	33
	4. MID. COUNTIES	80	44	62	1 below.	4	12	7 more.	34	31
	5. ENGLAND, S.	77	48	63	1 below.	3	12	8 more.	48	44
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	71	45	59	0 (average).	2	4	3 less.	43	38
	7. ENGLAND, N.W.	71	47	60	2 below.	4	12	3 more.	38	34
	8. ENGLAND, S.W.	73	53	62	1 below.	4	13	10 more.	53	48
	9. IRELAND, N.	74	42	58	2 below.	4	14	9 more.	42	37
	10. IRELAND, S.	77	43	61	1 below.	4	9	2 more.	49	45

General Remarks.

Weather was fine generally during the first two days in all parts of the Kingdom, and continued so in Scotland till the close of the period. Over England and Ireland, however, the sky soon became overcast and the weather unsettled and very showery. Thunderstorms were again experienced in different parts of the country, but were not so numerous as during the previous weeks.

Temperature, except in "Scotland, W.," was slightly below the mean in all districts. No very high readings were registered, the maxima ranging generally from 75° to 77°; at Nottingham, however, the thermometer rose to 80° on the 21st and to 79° on the 25th. The lowest of the minima occurred at most stations early on the morning of the 21st, and varied over England and Ireland from 42° to 48°. At Nairn a reading of 40° was recorded on the 25th.

Rainfall was less than the mean in the Scotch districts, but more in all other places; the excess was not large in "Ireland, S.," "England, N.E.," and "England, N.W.," but was considerable elsewhere.

Bright sunshine was more prevalent than it was during last week, but the number of hours recorded was still rather small. The percentage of total possible duration was again greatest in "England, S.W." (48) and least in "England, N.E." (26).

Wind was very light on all our coasts, and very variable in direction during the first three days, generally southerly on the 23rd and 24th, and south-westerly on the 25th, while at the close of the period it circulated round a depression which lay over central England, blowing from W. in the south, S. in the east, E. in the north, and from N. in the west.

Q 2376. 100.—7/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending July 26, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, July 20.

Weather fine at most of our southern and western stations, and in several parts of France, dull or cloudy generally. Cloudy and rainy in the S.W. and W. later, but fine all day elsewhere.

Temperature fallen a little within our eastern and central districts, and risen slightly over France, elsewhere little change; readings ranging from 50° in the Shetlands to 67° at Scilly. Maxima exceeding 70° at our inland stations, between 65° and 70°, except in the N.E.

Wind light or moderate generally; from the northward in Scotland and Ireland, from W. over England and the North Sea, and from E. over W. France. Wind backing to S.E. at Scilly later, but little other change.

Sea rough at Barrow and round the Shetlands.

Barometer risen over these Islands, scarcely changed on the Continent; large area of comparatively high pressure over France and our western coasts, with depression over Norway. Pressure increasing slightly all day, except in the S.W.

Wednesday, July 21.

Weather cloudy or dull in the countries to the eastward of the North Sea, but moderately fine elsewhere. Fine at most stations all day, but slight showers falling in the South.

Temperature risen on our northern coasts, changed little and irregularly elsewhere; readings ranging from 52° in the Shetlands to 64° in London. Maxima higher than of late, thermometer reaching 80° at Nottingham and 77° in London.

Wind light and variable over England and France, light from the northward over Scotland and Ireland, and strong from N.W. in N. Germany. An easterly breeze springing up at Scilly later, but variable winds continuing elsewhere.

Sea moderate to slight.

Barometer rising a little on our N.E. coasts and over Scandinavia, falling elsewhere. Pressure still high and uniform over these Islands, with depression over Sweden. Rather brisk decrease occurring in the S.W. at 6 P.M.

Thursday, July 22.

Weather dull and rainy over France and the S.E. and S. of England, fine and bright elsewhere. Fine all day generally, and clearing in the S.E. in the evening.

Temperature fallen a little in most places; readings ranging from 51° in the Shetlands to 61° at Valentia. Maxima between 65° and 70° generally, but below 65° in Scotland, and above 70° at Roche's Point and in London.

Wind light from the eastward on most of our coasts, but very variable over France, and still north-westerly in N. Germany. A brisk southerly wind springing up at Valentia.

Sea slight or smooth nearly all round our coasts.

Barometer falling a little in nearly all places. Readings very uniform over the whole of western Europe, but rather higher in S. France, and lower over the Baltic than elsewhere. Pressure giving way all day, but still very uniform.

Friday, July 23.

Weather fine in the E. of Great Britain and France, dull or cloudy in nearly all other places, with fog or mist at several stations, and showers in S. Ireland. Weather very fine in the E. all day, cloudy and rainy in the W.

Temperature risen slightly over these Islands, fallen on the Continent; readings ranging from 52° in the Shetlands to 66° in London. Maxima rather high, thermometer reaching 79° at Nottingham and 77° in London.

Wind northerly in the N.E. of Scotland and on the eastern shores of the North Sea, very light and variable over the E. of England and N. of France, and southerly on most other coasts. Light breezes between S.W. and S.E. general during day.

Sea moderate to calm.

Barometer falling everywhere, rather decidedly on our W. coasts. Area of high pressure over France, with ridge of high readings stretching northward over eastern England. Pressure giving way slowly all day.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, July 24.

Weather fine over France and the extreme S.E. coast of England, dull in nearly all other places, with rain at Liverpool. Sky cloudy all day, except in the S.E., thunder occurring at Mullaghmore, and rain falling except on our S. coast.

Temperature fallen a little in Ireland and over Scandinavia, risen elsewhere; readings ranging from 55° in the Shetlands to 64° at Yarmouth. Maxima generally between 65° and 70°, but exceeding 70° over central and eastern England and the S. of Ireland.

Wind southerly over the whole of these Islands and the N. of France, northerly over Scandinavia; blowing freshly at Scilly, but with light or moderate force elsewhere. Westerly breezes prevailing in the S., and southerly winds in the N. all day.

Sea rough round the Scilly Islands.

Barometer rising a little in the E. of France, falling in all other parts of western Europe. Pressure decreasing all day, but no change in the general distribution.

Sunday, July 25.

Weather very fine except in the N.W. of France, the Scilly Islands, and S. of Ireland. Rain setting in at Scilly later and cloudy weather spreading, but sky clear all day in E.

Temperature fallen slightly in the W. of France, risen elsewhere. Readings ranging from 54° in the Shetlands to 67° at Nottingham. Maxima considerably exceeding 70° in the E. of Scotland, and over central and eastern England.

Wind westerly in the S.E. of England, southerly and south-easterly on our other coasts. Moderate or light in most places, but freshening at Valentia. Wind backing to S.E. in the S.W. in the evening, and increasing.

Sea rough to the westward of Ireland.

Barometer showing very little change, inclined to fall in the W. and to rise in the E. and N. Pressure giving way everywhere during day—most in S.W.

Monday, July 26.

Weather very unsettled, sky cloudy or dull in nearly all places, with rain over Ireland, England, and the N. of France. Weather dull and rainy or showery all day.

Temperature fallen very generally. Readings ranging from 53° in the Shetlands to 63° at Hurst Castle. Maxima lower than of late, between 60° and 65° generally, and below 70° at all stations.

Wind south-westerly over France, southerly in the E. of England, easterly on our more northern coasts, and northerly in S. Ireland. Moderate to fresh in force. Not much change during day, but westerly gale springing up in Channel.

Sea rough in the S.W.

Barometer falling quickly over the British Isles, rising a little in S.W. of France, and falling slowly over Scandinavia. Readings still highest over the S. of France, with a well-marked depression over our S.W. coasts. Disturbance travelling eastward across England during day.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	59	44	52·7	−1·3	1	0·05	−0·23	*	*
	Stornoway	69	50	58·5	+2·5	0	—	−0·75	57	48
	Wick	65	40	55·9	−0·1	2	0·12	−0·28	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	68	57	61·7	−1·5	5	1·63	+1·07	*	*
	Jersey (Noirmont)	75	54	63·0	+0·2	4	0·81	+0·50	47	44

The above observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	69	40	56·0	−2·1	2	0 72	+0·11	*	*
	Aberdeen	70	47	58·2	−0·3	2	0·07	−0·58	56	48
	Glenalmond	70	46	56·8	−1·8	2	0·12	?	50	44
	Leith	75	46	58·9	+0·2	3	0·49	−0·12	*	*
2. ENGLAND, N.E.	Shields	68	49	57·0	−2·8	4	0·91	+0·28	*	*
	Durham	76	47	59·0	−0·7	4	0·52	−0·07	34	30
	York	72	48	59·2	−1·8	5	1·69	+1·21	25	22
	Spurn Head	71	53	59·9	−1·3	1	0·20	?	*	*
	Kelstern (Lincolnsh.) ℳ	72	47	58·1	−3·5	3	0·63	+0·14	?	?
3. ENGLAND, E.	Hillington ℳ	75	45	61·9	−0·4	2	1·04	+0·37	37	33
	Yarmouth	73	51	60·5	−2·5	4	1·35	+0·80	*	*
	Cambridge	76	52	63·5	−0·3	7	1·41	+0·89	?	?
	Rothamsted	79	50	62·4	−2·5	5	1·45	+0·84	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	73	47	60·0	−1·4	4	0·95	+0·34	*	*
	Nottingham	80	48	63·6	+0·6	4	1·62	+1·00	*	*
	Loughborough	76	50	63·5	+1·0	3	1·30	+0·82	*	*
	Leicester	73	51	62·3	−1·5	5	1·44	+0·84	39	35
	Birmingham (Oscott)	74	49	61·5	−1·0	5	1·07	+0·45	*	*
	Shrewsbury ℳ	72	46	60·7	−1·4	5	1·19	+0·61	*	*
	Churchstoke ℳ	71	44	59·6	−2·9	3	0·85	?	25	23
	Hereford ℳ	75	49	62·1	−0·9	4	1·44	+0·90	*	*
	Cirencester	75	50	62·0	−1·6	5	1·72	+1·07	37	34
	Oxford	72	52	62·0	−2·2	6	0·86	+0·31	36	33
5. ENGLAND, S.	London†	77	54	65·9	+1·4	4	0·92	+0·38	42	38
	Marlborough ℳ	74	50	62·6	−1·9	3	1·46	+0·91	*	*
	Strathfield Turgiss ℳ	76	49	62·2	−1·5	2	1·20	+0·68	*	*
	Dover	70	48	62·2	−0·8	5	0·69	+0·24	*	*
	Hastings (St. Leonard's)	73	54	62·3	−0·7	4	2·14	+1·74	*	*
	Southampton	74	50	62·7	−0·3	3	1·37	?	54	49
	Hurst Castle	70	54	62·2	−0·8	3	0·73	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	70	46	58·4	+0·7	2	0·15	?	*	*
	Glasgow	71	47	60·0	+1·2	2	0·31	−0·57	41	36
	Ardrossan	70	48	59·8	+1·3	1	0·08	−0·61	*	*
	Silloth (Cumberland)	70	46	60·0	0·0	4	0·40	−0·21	40	35
	Douglas (Isle of Man)	66	45	57·5	−2·5	3	0·80	+0·21	49	44
7. ENGLAND, N.W.	Barrow-in-Furness	70	51	60·8	+0·3	3	0·89	?	*	*
	Stonyhurst	71	49	59·8	−2·0	5	1·76	+0·81	39	35
	Blackpool ℳ	68	47	59·2	−1·8	3	1·01	+0·35	*	*
	Manchester	69	44	57·6	−3·9	4	0·89	+0·12	*	*
	Liverpool Obsy (Bidston)	69	52	60·8	−1·0	4	1·45	+0·55	*	*
	Llandudno ℳ	70	49	59·4	−1·1	4	1·79	?	37	33
	Holyhead	69	53	60·0	−1·2	3	0·71	−0·09	*	*
8. ENGLAND, S.W.	Pembroke	66	53	60·2	−2·1	4	0·89	+0·50	54	49
	Barnstaple								*	*
	Falmouth	68	55	61·9	−1·1	4	2·22	+1·62	51	47
	Plymouth	73	55	63·1	+0·3	5	1·35	+0·95	*	*
	Prawle Point	68	54	60·6	−2·0	4	0·71	?	*	*
9. IRELAND, N.	Londonderry	74	46	58·5	−1·5	4	2·14	+1·34	*	*
	Mullaghmore	70	50	59·8	−0·4	5	1·62	?	*	*
	Markree Castle	70	42	56·1	−4·3	5	1·57	+0·92	36	32
	Brookeborough	70	46	58·2	−2·0	4	1·05	?	*	*
	Armagh	68	46	57·9	−2·6	4	1·18	+0·48	47	42
	Donaghadee	65	46	56·5	−3·0	4	0·77	?	*	*
10. IRELAND, S	Dublin	68	49	59·0	−2·0	4	1·10	+0·56	39	35
	Parsonstown	72	43	58·1	−2·9	4	0·81	+0·11	42	38
	Roche's Point	77	54	64·9	+3·7	5	0·97	+0·28	*	*
	Valentia	69	46	60·3	−0·8	1	0·74	−0·16	67	61
	Foynes	72	49	59·9	−1·3	5	1·40	?	*	*

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Meteorological Office,
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The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	72	46	56	2 below.	6	12	6 more.	17	15
	2. ENGLAND, N.E.	71	45	58	3 below.	5	8	3 more.	41	37
	3. ENGLAND, E.	73	45	59	4 below.	6	9	4 more.	40	38
	4. MID. COUNTIES	72	43	60	3 below.	6	12	6 more.	42	39
	5. ENGLAND, S.	75	45	61	3 below.	6	13	6 more.	39	37
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	68	43	57	3 below.	5	12	4 more.	45	41
	7. ENGLAND, N.W.	70	44	59	3 below.	5	9	3 more.	49	46
	8. ENGLAND, S.W.	74	47	61	2 below.	6	10	5 more.	63	60
	9. IRELAND, N.	70	42	57	3 below.	7	13	7 more.	35	34
	10. IRELAND, S.	72	41	59	2 below.	5	10	4 more.	45	42

General Remarks.

Weather has been dull and very rainy in all parts of the Kingdom. Thunderstorms again occurred in several places, and in some localities were accompanied by heavy showers of hail.

Temperature was below the mean in all districts, over the greater part of the country the deficit was 3°, but in "England, E." as much as 4°. Both the maxima and minima were very low for the season, the highest reading recorded being 75° in London on the 27th and 28th, and the lowest of the minima 41° on July 30th at Parsonstown. In most other districts the lowest readings varied from 43° to 45°.

Rainfall was more than the mean in all districts; the excess was rather large in the E. of Scotland, the N. of Ireland, and the central and southern parts of England.

Bright sunshine was more prevalent than during last week over the western, central, and north-eastern parts of Great Britain, but elsewhere the number of hours recorded was less. The per-centage of total possible duration varied from 60° in "England, S.W." to 15 in "Scotland E."

Wind, although easterly in the N. on July 28th and very variable over England on August 1st, was otherwise generally westerly in direction and light or moderate in force. On July 28th, however, a fresh breeze was blowing at many of our western and southern stations.

Q 1438. 100.—8/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending August 2, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, July 27.

Weather fine over the S.E. of England, dull in nearly all other places, with rain over the Midland Counties and E. of England. Sky clear all day in S.E., but weather overcast with showers elsewhere.

Temperature risen at our western stations and on the eastern shores of the North Sea, fallen a little elsewhere; readings ranging from 51° in the Shetlands to 64° at Dover. Maxima slightly exceeding 70° over central and south-eastern England.

Wind variable; northerly in the Shetlands; easterly over Scotland and southerly in the Hebrides, westerly in most other places, but backing to S. at Valentia. Blowing strongly over France, but moderate on our coasts. Backing to S.E. at Valentia later, and to S.S.W. at Scilly.

Sea rough on French side of the Channel and off the Hebrides.

Barometer falling over Scotland and Scandinavia, rising elsewhere. Area of high pressure over France, with low readings off the W. of Scotland and over the S. of Norway. Barometer falling briskly in S.W. later, and large depression appearing over Ireland.

Wednesday, July 28.

Weather fine over the greater part of France, but dull over the Channel and the British Isles. Rain falling in many parts of the Kingdom. Cloudy and showery in most places all day, but clearing in S.E.

Temperature risen in the E., fallen on our western and northern coasts, and scarcely changed on the Continent. Readings ranging from 51° in the Shetlands to 64° in in London. Maxima between 55° and 65° generally, but again exceeding 70° at our inland stations.

Wind north-westerly in the S. of Ireland, south-westerly and southerly over England, easterly in Scotland, and north-easterly in the N. of Ireland. Blowing freshly generally and strongly in the W. of England. Very little change later.

Sea rough on our S.W. and N.W. coasts.

Barometer risen on the eastern shores of the North Sea, fallen elsewhere, rather briskly on our W. coasts. Well marked depression shown over Ireland. Disturbance moving north-eastward to Scotland later, and barometer rising Ireland.

Thursday, July 29.

Weather fine over southern and eastern France and the extreme S.E. coast of England, but dull or cloudy in nearly all other places with showers of rain at several stations. Weather very unsettled during day with severe thunderstorms over England.

Temperature fallen over these Islands, risen on the Continent; readings ranging from 51° at Stornoway to 65° at Yarmouth. Maxima between 60° and 65° generally, but between 70° and 73° in the S.E. of England.

Wind generally north-westerly in Scotland and Ireland, and westerly to southerly in England, France, and over the North Sea. Moderate or light in force on most coasts. Moderate to fresh westerly winds prevailing during day.

Sea rough round the N. of Scotland as well as off Brest and Hurst Castle.

Barometer falling except in Sweden; readings highest over the Peninsula, with depressions over the S.W. of England and N. of Scotland. South-western depression subsequently breaking up and northern one moving a little further northward, barometer rising slowly.

Friday, July 30.

Weather very fine over the Continent and at several of our north-western and north-eastern stations, dull, rainy, and unsettled elsewhere. Very showery all day.

Temperature fallen in most places—several degrees at our south-eastern stations; readings ranging from 50° at Stornoway to 61° at Scilly. Maxima 70° in London and 69° at Nottingham and Cambridge, between 60° and 65° elsewhere.

Wind north-westerly on our western and northern coasts, westerly over France, south-westerly to southerly on our E. coast and over the North Sea. Blowing strongly in the W. of France, but moderately at nearly all our stations.

Sea rough off the N.W. coast of France.

Barometer falling over Scandinavia and the Shetland Isles, rising elsewhere. Area of high pressure over Spain with well marked depression near Sumburgh Head. Mercury rising slowly all day.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, July 31.

Weather fine over England and the E. and S. of France, but cloudy or dull over Ireland and Scotland, with rain at Valentia and Mullaghmore. Weather fine all day in the E., cloudy and unsettled in the W.

Temperature fallen except in Ireland; uniform readings, ranging from 52° in the N. to 59° at Scilly. Maxima between 60° and 65° generally.

Wind westerly over the greater part of the United Kingdom, France, and North Sea, but easterly breeze reported from Valentia. Moderate westerly winds all day.

Sea rough off the S. of Ireland.

Barometer rising in nearly all places, but fresh fall occurring at Valentia. Mercury highest over Spain, lowest over the North Sea. Pressure decreasing all day in W.

Sunday, August 1.

Weather fine in the E. of England and Scotland and the N.W. of England, dull elsewhere, with rain over France and at some of our southern and western stations. Weather cloudy generally all day.

Temperature risen a little over the E. of England and fallen over France, very little other change. Readings ranging from 52° in the Hebrides to 62° at Scilly. Maxima between 60° and 70° except in the N. of Scotland.

Wind north-westerly and westerly over the greater part of these Islands and France, but southerly breezes reported from the Netherlands, and an easterly breeze over the S.E. of England. No change of importance later.

Sea rough off Ushant and round the Hebrides.

Barometer fallen in nearly all places except the Shetland Isles. Pressure highest over Spain and lowest over Scandinavia, with secondary depression over the Channel. Slight recovery during day and both depressions moving eastward.

Monday, August 2.

Weather fine on some parts of our E. and N.W. coasts, cloudy or dull elsewhere, with rain in some places. Unsettled and thundery over the greater part of the Kingdom during the day but clearing in the evening.

Temperature changed little and irregularly; ranging from 52° at Wick to 61° on our S. coast. Maxima between 60° and 65° over the greater part of the country but 72° at Leith and Prawle Point.

Wind north-westerly on our coasts and westerly over France. Moderate or light in force generally, but reaching a gale over the Bay of Biscay. Moderate north-westerly breezes all day.

Sea high in the Bay of Biscay.

Barometer risen a little generally. Readings still highest over Spain and lowest over W. Norway, with secondary depression over the S.W. of England. Pressure increasing slowly all day, no other change of importance.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟩⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	60	45	52·8	−1·2	5	1·23	+0·94	*	*
	Stornoway	62	45	53·3	−2·7	7	1·13	+0·85	20	18
	Wick	60	44	53·1	−2·9	5	1·17	+0·72	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	68	55	61·3	−1·7	6	0·24	−0·27	*	*
	Jersey (Noirmont)	67	56	61·5	−1·4	6	0·71	+0·24	59	56

The above observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	62	49	54·4	−3·6	6	1·40	+0·79	*	*
	Aberdeen	63	48	56·2	−2·0	6	1·87	+1·20	17	15
	Glenalmond									
	Leith	72	46	58·5	−0·3	5	0·41	−0·19	*	*
2. ENGLAND, N.E.	Shields	67	46	56·8	−2·8	5	0·78	+0·23	*	*
	Durham	71	46	58·7	−1·7	3	0·78	+0·18	40	36
	York	68	47	58·7	−2·0	5	0·89	+0·39	41	38
	Spurn Head	68	52	59·5	−1·5	5	0·61	?	*	*
	Kelstern (Lincolnsh.) ⚓	67	45	56·6	−4·7	7	0·83	+0·33		
3. ENGLAND, E.	Hillington ⚓	72	45	58·8	−3·4	6	0·80	+0·50	27	25
	Yarmouth	71	50	58·9	−4·0	6	0·87	+0·37	*	*
	Cambridge	73	47	60·0	−3·5	5	0·69	+0·19	53	50
	Rothamsted	73	48	60·0	−4·7	7	1·22	+0·62	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	70	43	59·2	−1·9	5	0·60	+0·01	*	*
	Nottingham	72	45	59·2	−3·6	7	2·25	+1·61	*	*
	Loughborough	72	49	60·9	−1·5	5	1·40	+0·95	*	*
	Leicester	70	48	59·8	−3·7	6	1·04	+0·44	35	32
	Birmingham (Oscott)	71	47	59·5	−2·6	7	1·12	+0·59	*	*
	Shrewsbury ⚓	70	46	59·8	−2·2	3	0·93	+0·35	*	*
	Churchstoke ⚓	68	46	58·2	−3·3	6	1·28	?	49	45
	Hereford ⚓	71	46	60·2	−2·5	7	0·83	+0·31	*	*
	Cirencester	69	44	58·8	−4·7	6	1·27	+0·62	43	40
	Oxford	70	47	59·8	−4·2	6	1·04	+0·50		
5. ENGLAND, S.	London†	75	47	62·2	−2·0	7	1·68	+1·18	39	37
	Marlborough ⚓	71	47	60·4	−4·1	7	1·09	+0·53	*	*
	Strathfield Turgiss ⚓	74	45	60·8	−3·2	6	1·29	+0·83	*	*
	Dover	69	51	61·5	−1·5	6	0·80	+0·34	*	*
	Hastings (St. Leonard's)	67	48	60·0	−3·1	6	0·59	+0·19	*	*
	Southampton	73	48	60·6	−2·4	6	1·91	?	38	36
	Hurst Castle	70	51	60·9	−2·4	7	1·73	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	62	43	54·7	−3·1	7	1·20	?	*	*
	Glasgow	64	44	55·3	−3·4	3	1·35	+0·45	41	37
	Ardrossan	65	45	56·9	−1·7	5	1·11	+0·36	*	*
	Silloth (Cumberland)	68	45	58·6	−1·4	4	0·77	+0·14	41	37
	Douglas (Isle of Man)	65	48	57·1	−2·9	5	1·42	+0·77	52	48
7. ENGLAND, N.W.	Barrow-in-Furness	66	52	59·5	−1·1	5	0·87	?	*	*
	Stonyhurst	68	44	57·7	−4·1	5	0·49	−0·51	52	48
	Blackpool ⚓	66	48	58·3	−2·4	4	0·60	−0·01	*	*
	Manchester	66	45	57·2	−4·1	6	1·50	+0·76	*	*
	Liverpool Obsy (Bidston)	70	50	59·1	−2·5	6	0·49	−0·33	*	*
	Llandudno ⚓	68	51	59·2	−1·8	3	0·42	?	46	43
	Holyhead	64	52	58·4	−2·8	5	1·94	+1·51	*	*
8. ENGLAND, S.W	Pembroke	63	54	58·9	−3·1	5	1·50	+0·93	59	56
	Barnstaple	74	47	63·3	+0·3	6	1·52	+0·75	*	*
	Falmouth	68	52	61·2	−2·0	6	0·94	+0·31	67	63
	Plymouth	71	49	62·0	−0·9	6	0·60	−0·05	*	*
	Prawle Point	72	51	59·7	−2·8	6	0·62	?	*	*
9. IRELAND, N.	Londonderry	69	47	56·8	−2·7	7	1·42	+0·72	*	*
	Mullaghmore	66	49	57·0	−3·0	7	1·49	?	*	*
	Markree Castle	69	44	56·6	−3·4	7	1·43	+0·71	32	31
	Brookeborough	70	42	55·8	−4·4	6	1·16	?	*	*
	Armagh	68	46	56·6	−3·6	7	1·37	+0·67	38	37
	Donaghadee	69	45	56·2	−3·3	7	1·08	?	*	*
10. IRELAND, S	Dublin	69	47	58·8	−2·1	5	0·53	−0·01	49	45
	Parsonstown	68	41	55·9	−4·7	6	0·95	+0·20	42	39
	Roche's Point	72	50	61·0	−0·2	5	1·92	+1·22	*	*
	Valentia	68	50	59·5	−1·7	6	0·89	−0·01	44	41
	Foynes	67	50	58·1	−2·0	5	0·60	?	*	*

Stations marked ⚓ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The Sunshine values for London are the means of observations made at Hampstead, Kew Observatory, and the London Institution, Finsbury Circus.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 32.] WEEK ENDING MONDAY, AUGUST 9, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	72	42	60	2 above.	5	5	4 less.	38	35
	2. ENGLAND, N.E.	73	46	61	0 (average).	4	9	4 more.	40	37
	3. ENGLAND, E.	75	43	61	2 below.	3	11	6 more.	38	36
	4. MID. COUNTIES	76	45	61	2 below.	3	8	2 more.	35	33
	5. ENGLAND, S.	78	44	62	2 below.	3	5	0 (average).	37	36
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	73	44	59	0 (average).	4	9	0 (average).	36	34
	7. ENGLAND, N.W.	72	48	60	1 below.	5	18	12 more.	39	37
	8. ENGLAND, S.W.	76	42	61	2 below.	5	4	2 less.	40	38
	9. IRELAND, N.	71	40	59	1 below.	6	11	3 more.	36	33
	10. IRELAND, S.	73	45	61	1 below.	5	13	5 more.	36	34

General Remarks.

Weather during the greater part of this period was dull, very showery, and in some places thundery. On the 8th, however, the sky cleared considerably, and the following day was very fine and bright in all except the extreme western parts of the country.

Temperature was slightly above the mean in "Scotland, E.," and equal to it in "England, N.E.," but elsewhere readings were again a little below the mean. The thermometer was generally highest on the 5th, and in London it rose to 78°; in some places, however, the maxima were registered on the 9th, and over central England were as high as 75° or 76°. The lowest of the minima occurred in most districts on the 7th, but over central Ireland readings were lowest early on the morning of the 9th, when at Markree Castle temperature went down to 40°.

Rainfall was less than the mean in "Scotland, E.," and "England, S.W.," and equal to it in "England, S.," and "Scotland, W.," but in all other districts the fall was more than the average. The amount collected over England on the 7th was rather heavy, and at some stations exceeded an inch.

Bright sunshine was less prevalent than during last week in nearly all parts of the country. The number of hours recorded shows great uniformity, the per-centage of total possible duration ranging from 39 in "England, N.E.," to 33 in the "Midland Counties" and "Ireland, N."

Wind was generally light or moderate from the south-westward till the 7th, when, after blowing a gale at some of our southern stations, it veered to W. or W.N.W., and continued to blow with moderate force from that quarter until the close of the period.

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II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending August 9, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, August 3.

Weather very fine over France and nearly the whole of these Islands, but dull in Ireland and the N. of Scotland. Rain commencing in Ireland later, and cloudy weather spreading to most stations.

Temperature fallen over France, risen elsewhere; readings ranging from 54° in the Shetlands to 63° at Nottingham. Maxima exceeding 70° at inland stations; between 65° and 70° elsewhere.

Wind between W. and N. on most of our own and the French coasts, and over the North Sea, but south-westerly breeze springing up at Mullaghmore. South-westerly wind spreading to most of our western and northern stations later.

Sea moderate to calm.

Barometer rising very generally; pressure highest over Bay of Biscay, lowest over Scandinavia. Slight fall taking place in Ireland during the day.

Wednesday, August 4.

Weather become very cloudy, except in the S. of France and on the extreme S.E. coast of England; fog or mist prevailing at several stations. Rain falling in the W. later, but weather improving in the S.E. and E.

Temperature risen a little at our stations, scarcely changed elsewhere. Readings ranging from 55° in the Shetlands to 67° at Nottingham. Maxima higher than on 3rd, ranging between 70° and 75° in our eastern and central districts.

Wind easterly over France, and between S. and W. over these Islands and Scandinavia; blowing freshly in the W. of Ireland, lightly or moderately elsewhere. South-westerly and southerly breezes continuing all day.

Sea rough off Valentia.

Barometer risen a little over Norway and Sweden; fallen somewhat over these Islands, and changed very little elsewhere. Anticyclone now shown over France, with low pressures off our N.W. coasts and the W. of Norway. Mercury falling all day.

Thursday, August 5.

Weather fine over the E. of France, to the eastward of the North Sea, and in some parts of Ireland and Scotland, dull elsewhere, with rain and mist in the S.W. Fine in the E., cloudy and showery in the W. during day.

Temperature fallen somewhat on our W. and S.W. coasts, risen in most other places. Readings uniform, ranging from 57° at Stornoway to 67° at Nottingham. Maxima again between 70° and 75° in the eastern and central districts, and 78° in London.

Wind easterly to south-easterly over France and Norway, but southerly and south-south-westerly on our coasts, blowing lightly or moderately generally, but freshly over the Irish Sea. Wind veering in Ireland later; little other change.

Sea moderate to smooth.

Barometer falling in nearly all places—most at Biarritz. Readings highest over the E. of France and Germany, lowest off our N.W. coasts. Slight increase occurring in the evening at Biarritz and Valentia, decrease continuing elsewhere.

Friday, August 6.

Weather fine at a few of our E. coast stations, overcast in nearly all other places, with showers of rain in the W. Weather unsettled all day and clouding over in the S.E. in the evening.

Temperature risen over France and the N. of Scandinavia, fallen over the British Isles. Readings ranging between 57° at Stornoway and 67° in London. Maxima about 70° at our central stations.

Wind south-easterly and easterly over the Netherlands and Straits of Dover, westerly on our S.W. coasts, and south-westerly and southerly elsewhere. Light or moderate in force generally. Little change in direction later, but wind blowing freshly in the N.W.

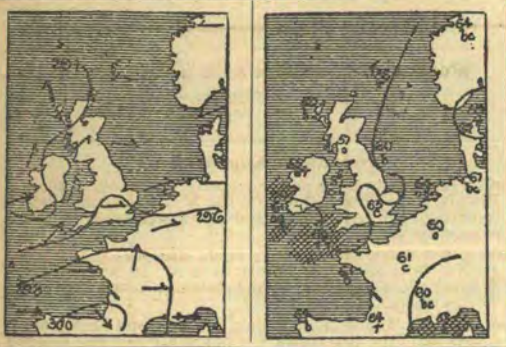
Sea moderate to smooth.

Barometer risen over Sweden, fallen somewhat over these Islands and France. Readings high over the Mediterranean and over the Gulf of Bothnia, low near the Hebrides. Pressure increasing in the W. and N. later, but depression forming in the S.E.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.



Saturday, August 7.

Weather fine all over the more northern and eastern districts, dull, rainy, and unsettled on our W. and S.W. coasts, and over the W. of France. Showery unsettled weather experienced all day except in Scotland.

Temperature fallen a little in most places. Readings ranging from 54° at Parsonstown to 65° at Dover. Maxima between 60° and 70° generally.

Wind westerly on our more southern coasts and over France, south-westerly and southerly in the N. Blowing strongly on our S.W. coasts and strongly over Bay of Biscay. Wind increasing considerably later, and rising to a fresh or strong gale all over the Channel and S. of England.

Sea rough at Valentia and Scilly.

Barometer falling except in the S.W. of France. Change considerable over Ireland, and well marked depression appearing over that country. Disturbance travelling quickly eastward over us, barometer falling fast over S. England, recovering quickly in Ireland.

Sunday, August 8.

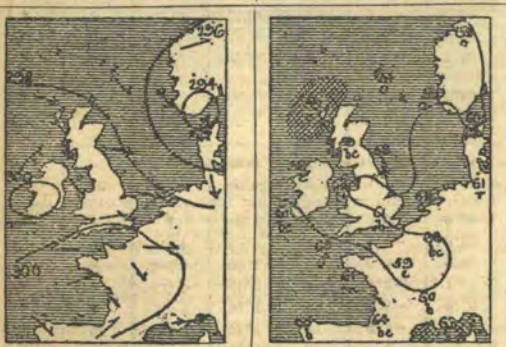
Weather unsettled and varying a good deal; fine in the S. of Scotland and over Wales, cloudy elsewhere, with showers of rain in some places. Showers of rain and slight thunderstorms occurring in the N.E. and E.

Temperature fallen several degrees in the S.E., but changed very little elsewhere. Readings ranging from 55° at Sumburgh Head to 63° at Aberdeen and 61° in London. Maxima between 65° and 75° generally.

Wind north-westerly and westerly over the whole of these Islands and France, but southerly on the eastern shores of the North Sea. Blowing freshly or strongly in nearly all places, but moderating during the day.

Sea rough on our N.W., S.W., and S. coasts, and high in the Straits of Dover.

Barometer rising quickly over the British Isles, but falling briskly to the eastward of the North Sea. Small disturbance, noticed on 7th, shown over Holland. Barometer rising all day and disturbance travelling eastward.



Monday, August 9.

Weather dull and rainy in the S.W. and cloudy in the extreme N., fine elsewhere. Very fine all day except in the extreme W. No rain falling within these Islands.

Temperature changed irregularly, but risen in most places. Readings ranging from 54° in the Shetlands to 64° at Nottingham. Maxima between 70° and 75° at our midland and eastern stations.

Wind westerly to north-westerly on nearly all our own and the French coasts, but light easterly breezes reported from Scilly and the S. of Ireland. Moderate in force generally, shifting to S. at Valentia later, and increasing to a strong breeze.

Sea moderate to smooth except at Stornoway.

Barometer risen everywhere, quickly in the E. and N., but slightly in the S.W. Pressure high and uniform over these Islands and France, with small disturbance noticed above over the Skager Rack. Pressure increasing all day.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	64	50	56·0	+1·8	5	3·37	+2·95	*	*
	Stornoway	65	45	56·4	+0·6	5	0·45	−0·36	35	32
	Wick	71	47	58·7	+2·7	2	0·19	−0·31	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	70	56	62·1	−0·5	6	0·22	−0·28	*	*
	Jersey (Noirmont)	74	54	62·5	−0·5	5	0·42	−0·08	49	48

The above observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	69	45	60·1	+2·0	5	0·34	−0·30	*	*
	Aberdeen	68	47	59·8	+1·8	5	0·26	−0·44	38	35
	Glenalmond	68	42	57·0	−1·1	6	1·22	?	?	?
	Leith	72	49	62·0	+3·2	4	0·11	−0·49	*	*
2. ENGLAND, N.E.	Shields	72	49	60·1	+0·9	5	0·66	+0·11	*	*
	Durham	73	46	61·0	+0·6	4	1·30	+0·73	38	35
	York	73	46	60·7	+0·1	4	0·76	+0·24	44	41
	Spurn Head	70	53	61·0	+0·3	3	0·84	?	*	*
	Kelstern (Lincolnsh.) ⚓	70	48	60·0	−1·2	3	1·01	+0·51	38	36
3. ENGLAND, E.	Hillington ⚓	75	43	61·0	−1·5	3	1·08	? +0·78	33	31
	Yarmouth	71	49	60·3	−1·9	3	1·55	+1·10	*	*
	Cambridge	75	47	62·1	−1·1	2	0·76	+0·30	42	40
	Rothamsted	71	48	60·5	−3·7	3	0·80	+0·24	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	75	47	60·8	−0·2	4	1·35	+0·81	*	*
	Nottingham	74	46	61·1	−1·2	3	0·94	+0·30	*	*
	Loughborough	75	49	62·0	0·0	3	1·10	+0·65	*	*
	Leicester	72	49	60·6	−2·4	5	1·22	+0·62	31	29
	Birmingham (Oscott)	73	48	60·3	−1·7	3	0·69	+0·06	*	*
	Shrewsbury ⚓	76	47	60·7	−1·3	3	0·66	+0·07	*	*
	Churchstoke ⚓	72	48	59·7	−1·8	3	0·94	?	40	38
	Hereford ⚓	75	48	62·2	−0·3	2	0·09	−0·41	*	*
	Cirencester	74	45	60·0	−3·4	3	0·64	−0·01	34	32
	Oxford	72	49	60·9	−2·7	4	0·44	−0·07	34	32
5. ENGLAND, S.	London†	78	47	62·6	−1·4	3	0·32	−0·14	34	33
	Marlborough ⚓	75	48	61·2	−3·1	3	0·71	+0·14	*	*
	Strathfield Turgiss ⚓	75	44	61·4	−2·6	3	0·34	−0·06	*	*
	Dover	69	53	61·8	−1·1	3	0·53	+0·08	*	*
	Hastings (St. Leonard's)	71	51	60·9	−2·2	2	0·42	+0·02	*	*
	Southampton	74	47	61·4	−2·1	4	0·49	?	39	38
	Hurst Castle	70	50	62·2	−1·3	3	0·38	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	66	51	59·0	+0·3	6	1·50	?	*	*
	Glasgow	67	47	58·4	−0·3	4	0·83	−0·07	37	34
	Ardrossan	73	52	60·0	+1·6	4	1·35	+0·55	*	*
	Silloth (Cumberland)	69	44	60·5	+0·9	3	0·37	−0·28	36	33
	Douglas (Isle of Man)	67	45	57·5	−2·1	5	0·63	−0·07	36	34
7. ENGLAND, N.W.	Barrow-in-Furness	67	53	60·0	0·0	5	1·24	?	*	*
	Stonyhurst	71	49	59·6	−1·9	4	2·05	+1·03	39	36
	Blackpool ⚓	69	53	60·5	0·0	4	1·81	+1·27	*	*
	Manchester	72	48	58·1	−3·0	5	2·48	+1·76	*	*
	Liverpool Obsy (Bidston)	72	52	61·0	−0·3	4	1·36	+0·66	*	*
	Llandudno ⚓	70	53	60·9	−1·0	4	1·47	?	39	37
	Holyhead	?	?	?	?	5	1·95	+1·46	*	*
8. ENGLAND, S.W	Pembroke	66	55	60·0	−1·7	5	0·43	−0·17	40	38
	Barnstaple	76	42	60·0	−2·5	4	0·28	−0·52	*	*
	Falmouth	69	55	61·7	−1·3	6	0·36	−0·28	39	38
	Plymouth	70	54	62·8	+0·2	4	0·45	−0·17	*	*
	Prawle Point	68	53	60·3	−2·2	5	0·24	?	*	*
9. IRELAND, N.	Londonderry	70	49	59·3	+0·2	6	1·11	+0·30	*	*
	Mullaghmore	69	52	59·9	+0·3	5	1·27	?	*	*
	Markree Castle	71	40	58·8	−0·8	7	1·14	+0·34	32	30
	Brookeborough	69	43	58·6	−1·4	5	1·99	?	*	*
	Armagh	68	49	59·3	−0·5	5	0·93	+0·25	39	36
	Donaghadee	67	48	59·0	−0·5	5	0·42	?	*	*
10. IRELAND, S	Dublin	70	51	60·3	−0·2	6	1·07	+0·52	40	38
	Parsonstown	71	45	59·3	−0·9	4	1·51	+0·74	36	34
	Roche's Point	73	50	61·4	+0·4	4	1·00	+0·27	*	*
	Valentia	67	48	60·4	−0·6	5	1·21	+0·31	31	29
	Foynes	72	47	59·6	−1·0	7	1·52	?	*	*

Stations marked ⚓ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.
† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL;
AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 33.] WEEK ENDING MONDAY, AUGUST 16, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Waterford, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	DISTRICTS.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	81	48	61	4 above.	1	less than ½	6 less.	?	?
	2. ENGLAND, N.E.	79	48	62	2 above.	1	less than ½	5 less.	49	48
	3. ENGLAND, E.	79	45	63	0 (average).	1	less than ½	4 less.	38	37
	4. MID. COUNTIES	81	45	64	2 above.	1	less than ½	5 less.	47	46
	5. ENGLAND, S.	79	47	65	2 above.	1	less than ½	4 less.	45	44
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	79	50	64	6 above.	1	less than ½	8 less.	49	47
	7. ENGLAND, N.W.	78	47	64	3 above.	1	less than ½	7 less.	61	59
	8. ENGLAND, S.W.	81	50	65	3 above.	1	less than ½	7 less.	62	61
	9. IRELAND, N.	82	49	66	7 above.	1	less than ½	7 less.	53	53
	10. IRELAND, S.	80	52	66	6 above.	1	2	6 less.	48	46

General Remarks.

Weather during this period, though dull on some days, has been much finer than of late, and very dry. Thunderstorms, however, were experienced in the W. of Ireland on several evenings, especially on the 14th and 15th, but were not accompanied by much rain at any of *our* stations.

Temperature was considerably above the mean in Ireland and Scotland, and two or three degrees above in most of the English districts, but in "England, E.," it was about its mean value. The highest readings observed were much in excess of those recorded for a long time past, the maxima being 82° in "Ireland, N.," and 79° to 81° in nearly all other districts. The thermometer was lowest during the morning of the 10th, when it went down to 45° in the eastern and central parts of England; on the whole, however, the nights were mild.

Rainfall was scarcely measureable in any district excepting "Ireland, S.," and even there it was very slight.

Bright sunshine has been much more prevalent than it was during last week, but the number of hours recorded was nowhere very great. The per-centage of possible duration varied from 61 in "England, S.W.," to 37 in "England, E."

Wind on the 10th was generally south-westerly, and on the following day very variable, but during the remainder of the period it was generally north-easterly. In force it was moderate or light in all parts of the Kingdom.

Q 2647. 100.—8/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE during the Week ending August 16, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, August 10.

Weather rather cloudy and foggy on our W. and S.W. coasts and over the N.W. of France, very fine and bright generally. Weather very fine all day in the E., dull in the W. No rain falling.

Temperature risen a little in most places. Readings ranging from 56° in the Shetlands to 65° at Dover. Maxima between 65° and 75° generally, but 81° at Aberdeen, and 79° in London.

Wind light or moderate generally but strong in Hebrides—blowing from E. over France, from S.E. on our S.W. coasts, and from W. elsewhere. South-westerly winds in the W. and N.

Sea slight except near the Hebrides.

Barometer risen generally, large anticyclone lying over France and our S. districts. Pressure increasing all day except in S.E.

Wednesday, August 11.

Weather still cloudy in W., very fine elsewhere. Very fine all day in most districts, and no rain falling. Aurora seen in the N. at night.

Temperature risen again generally. Readings uniform, ranging from 59° at Scilly to 71° at Leith. Maxima 80° at Leith and Nottingham and 79° in London.

Wind very light—from S.W. and S. in the W. and N., and from N. and N.E. in the E. and S. Very little change during the day.

Sea smooth or calm.

Barometer falling over France and our S. coast, rising elsewhere. Anticyclone shown over these Islands, the North Sea, and Scandinavia. Fall continuing over France and spreading northward over England and Ireland, but barometer still rising in N.

Thursday, August 12.

Weather dull over central England and the S. of Ireland, clear or nearly so elsewhere. Fine generally all day, but thunderstorm occurring at Valentia in the evening. A brilliant display of Aurora again at our western and northern stations.

Temperature risen over Norway and Denmark, fallen in most other places,—quickly over the midland counties. Readings ranging from 58° at Oxford to 70° at Barrow. Maxima between 70° and 75° generally.

Wind light and variable in the N., north-easterly to easterly elsewhere; moderate in force on our coasts, fresh over the Bay of Biscay. North-easterly breezes prevailing all day, except in W. of Ireland.

Sea slight or smooth.

Barometer changing very little. Anticyclone still lying over Scotland and Norway, with low pressures over the S.E. of France. Pressure giving way slowly all day.

Friday, August 13.

Weather much the same as on the 12th,—dry, except for a time along our N.E. coasts, but dull over England, clear in Scotland and Ireland. Brilliant Aurora again at the northern and western stations.

Temperature little changed at first, but maxima of 74° to 77° recorded over England, and rather higher in France. Night warm.

Wind generally north-easterly; light in the N., moderate elsewhere. Local sea breeze in W. of Ireland at night.

Sea smooth.

Barometer still highest in N., lowest in S.E. and S.; scarcely changing during day.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, August 14.

Weather showing no material change, beyond becoming rather more cloudy or hazy in Scotland; still very bright and fine in the western districts.

Temperature unchanged; maxima varying from 72° to 77° over England, and still higher in Ireland, but all below 70° in Scotland.

Wind exceedingly light or calm at the Scotch stations; light to moderate from N.N.E. and N.E. over Ireland and England, and from E.N.E. in France.

Sea smooth, or nearly so, except at the mouth of the Humber.

Barometer undergoing no material change.

Sunday, August 15.

Weather dull over the whole of Great Britain, but clearing in a few places during the day; fine and bright in Ireland.

Temperature showing little change at 8 A.M., but not rising nearly so high over Great Britain as on 14th; very warm and summerlike in Ireland, where the maxima varied from 75° to 79°.

Wind nearly calm in Scotland and Ireland, moderate or light from N.E. over England.

Sea smooth generally.

Barometer very steady; slightly lower in all places than on 14th, but the relative distribution of pressure the same as for several days past.

Monday, August 16.

Weather dull and gloomy except in Ireland; slight rain at one or two stations, and thunderstorms observed at Valentia in evening.

Temperature still lower than on 15th; morning readings varying from about 57° on our most northern coast to 63° at Scilly, and maxima rising above 70° in Ireland only.

Wind rather more easterly than of late, but still generally E.N.E. in direction, and light to moderate in force.

Sea smooth, or nearly so, on all coasts.

Barometer showing scarcely any change; readings varying from 30·2 in. in Scotland to 29·9 in. over the S. of France.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟩⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	69	50	58·5	+4·3	0	—	−0·50	*	*
	Stornoway	73	53	62·3	+7·2	0	—	−0·85	40	37
	Wick	76	52	61·3	+5·3	1	0·01	−0·58	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	70	56	63·3	+1·2	3	0·04	−0·42	*	*
	Jersey (Noirmont)	74	57	64·3	+1·5	0	—	−0·52	?	?

The above observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	76	53	63·3	+5·9	0	—	−0·65	*	*
	Aberdeen	81	51	62·7	+5·2	1	0·03	−0·69	?	?
	Glenalmond	76	48	57·1	−0·7	2	0·02	?	?	?
	Leith	80	52	62·6	+4·1	0	—	−0·58	*	*
2. ENGLAND N.E.	Shields	73	49	60·2	+1·4	1	0·02	−0·53	*	*
	Durham	76	48	61·2	+0·8	2	0·02	−0·53	38	37
	York	79	48	64·4	+4·0	1	0·01	−0·54	64	62
	Spurn Head	73	54	61·9	+1·5	0	—	?	*	*
	Kelstern (Lincolnsh.) ℳ	77	48	62·1	+1·2	0	—	−0·51	46	45
3. ENGLAND, E.	Hillington ℳ	77	45	62·0	0·0	0	—	−0·37	36	35
	Yarmouth	70	54	61·6	−0·2	1	0·01	−0·39	*	*
	Cambridge	79	48	64·4	+1·7	0	—	−0·40	39	38
	Rothamsted	75	47	62·4	−1·1	3	0·09	−0·41	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	80	52	63·4	+2·8	0	—	−0·50	*	*
	Nottingham	80	46	64·8	+2·9	1	0·02	−0·50	*	*
	Loughborough	81	47	65·5	+3·7	0	—	−0·45	*	*
	Leicester	78	49	64·2	+2·0	0	—	−0·50	49	48
	Birmingham (Oscott)	78	51	63·7	+1·8	0	—	−0·63	*	*
	Shrewsbury ℳ	78	45	64·0	+2·6	0	—	−0·56	*	*
	Churchstoke ℳ	76	47	63·2	+2·2	0	—	?	46	45
	Hereford ℳ	80	46	65·4	+3·4	0	—	−0·47	*	*
	Cirencester	77	46	63·4	+0·6	0	—	−0·65	46	45
	Oxford	76	52	64·3	+1·2	1	0·01	−0·45	?	?
5. ENGLAND, S.	London†	79	51	65·9	+2·4	0	—	−0·41	40	39
	Marlborough ℳ	78	47	64·1	+0·6	0	—	−0·56	*	*
	Strathfield Turgiss ℳ	78	47	64·9	+1·3	0	—	−0·38	*	*
	Dover	72	55	64·3	+1·8	1	0·02	−0·44	*	*
	Hastings (St. Leonard's)	78	55	65·5	+3·0	1	0·01	−0·41	*	*
	Southampton	79	48	65·8	+2·8	0	—	?	50	49
	Hurst Castle	74	52	65·0	+1·9	0	—	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	79	53	65·2	+8·0	2	0·02	?	*	*
	Glasgow	76	53	63·2	+4·9	0	—	−0·91	35	33
	Ardrossan	78	54	64·1	+6·0	0	—	−0·86	*	*
	Silloth (Cumberland)	78	50	63·4	+4·4	1	0·02	−0·67	52	50
	Douglas (Isle of Man)	78	51	63·7	+4·2	0	‡0·01	−0·75	61	59
7. ENGLAND, N.W.	Barrow-in-Furness	77	54	65·1	+5·4	0	—	?	*	*
	Stonyhurst	78	54	64·5	+3·6	1	0·01	−1·02	62	60
	Blackpool ℳ	77	47	62·5	+2·4	0	—	−0·51	*	*
	Manchester	78	48	63·1	+2·3	0	—	−0·71	*	*
	Liverpool Obsy (Bidston)	75	55	65·0	+4·2	0	—	−0·59	*	*
	Llandudno ℳ	71	55	63·2	+2·8	0	—	?	60	58
	Holyhead	68	57	63·0	+2·2	0	—	−0·54	*	*
8. ENGLAND, S.W	Pembroke	74	58	64·4	+3·3	0	—	−0·60	66	65
	Barnstaple	81	50	68·4	+6·4	1	0·06	−0·74	*	*
	Falmouth	73	57	63·3	+0·8	1	0·01	−0·64	57	56
	Plymouth	76	55	66·3	+4·0	0	—	−0·60	*	*
	Prawle Point	75	51	64·0	+2·0	0	—	?	*	*
9. IRELAND, N.	Londonderry	82	53	66·2	+7·3	0	—	−0·82	*	*
	Mullaghmore	76	57	67·9	+8·9	0	—	?	*	*
	Markree Castle	80	40	65·7	+6·5	2	0·22	−0·64	55	53
	Brookeborough	80	54	67·0	+7·4	0	—	?	*	*
	Armagh	75	56	65·7	+6·5	0	—	−0·64	55	53
	Donaghadee	72	54	62·2	+3·1	0	—	?	*	*
10. IRELAND, S	Dublin	73	58	64·4	+4·4	0	—	−0·59	57	55
	Parsonstown	78	52	65·2	+5·7	0	—	−0·80	44	43
	Waterford	79	55	67·1	+6·8	0	‡0·01	?	*	*
	Roche's Point	80	56	67·3	+6·7	0	—	−0·77	*	*
	Valentia	76	54	65·3	+4·8	2	0·72	−0·20	42	41
	Foynes	75	52	64·9	+4·8	2	0·64	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.
† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory.
‡ Dew.
N.B.—Waterford has now been added to the stations in "Ireland, S."

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 34.] WEEK ENDING MONDAY, AUGUST 23, 1880. [*Price* 2*d.*
[*Annual subscription, post paid*, 12*s.* 6*d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Waterford, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	73	45	59	2 above.	1	less than ½	6 less.	15	15
	2. ENGLAND, N.E.	72	42	59	1 below.	2	1	4 less.	14	14
	3. ENGLAND, E.	77	49	62	0 (average).	2	1	4 less.	18	18
	4. MID. COUNTIES	71	50	60	1 below.	1	less than ½	5 less.	8	8
	5. ENGLAND, S.	78	47	65	2 above.	1	less than ½	5 less.	38	38
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	73	48	60	2 above.	0	—	8 less.	21	21
	7. ENGLAND, N.W.	71	47	61	1 above.	0	—	7 less.	28	28
	8. ENGLAND, S.W.	78	54	64	2 above.	1	less than ½	7 less.	40	40
	9. IRELAND, N.	75	48	61	2 above.	0	—	8 less.	25	25
	10. IRELAND, S.	76	47	62	3 above.	1	1	6 less.	42	42

General Remarks.

Weather during this week has again been very dry in nearly all parts of the Kingdom. The sky, however, has been densely overcast except at some of the south-western stations, and a thunderstorm occurred at Valentia on the 22nd.

Temperature was a little below the mean over most of the eastern districts, but slightly above in the W. and S., as well as in the E. of Scotland. The readings were never very high, the maximum reported being 78°, which was recorded at Barnstaple and in London. At Durham the thermometer went down to 42° on the 20th, but elsewhere the lowest of the minimum readings were between 45° and 47°.

Rainfall was very slight in all districts.

Bright sunshine, excepting in the south-western parts of the Kingdom, has been exceedingly deficient, and in some places almost entirely absent. The total number of hours registered during the week at several of our inland stations was only 11 or 12, and at Churchstoke there were only two hours during which the sun shone brightly.

Wind was generally north-easterly over the whole country, and light or moderate in force. At the extreme northern stations, however, it was rather more variable, and on the 20th blew lightly from the south-westward and westward.

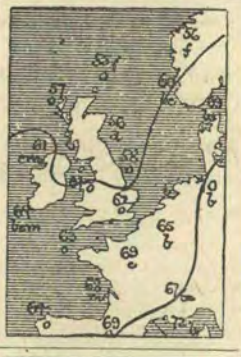
Q 2701. 100.—8/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending August 23, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.



Tuesday, August 17.

Weather very dull and cloudy in Great Britain, fine in Ireland, and dry generally. Sky clearing in some places later on, but slight rain falling at Shields, and a thunderstorm occurring at Jersey.

Temperature low generally in morning, subsequently rising to between 70° and 75° over our south-eastern counties and the S.E. of Ireland, but not exceeding 60° to 65° in the N.

Wind very light northerly in Scotland, north-easterly over England and Ireland, and blowing freshly in the Channel.

Sea moderate in the S.W. and S.E., slight or smooth elsewhere.

Barometer highest (30·2 ins.) over Scotland, lowest (29·9 ins.) over southern part of Bay of Biscay; scarcely any change all day.

Wednesday, August 18.

Weather showing hardly any change; cloudy and gloomy over England, especially at inland stations; moderately clear in Ireland. Half an inch of rain at Jersey during day and three hundredths at Valentia

Temperature very little changed; 8 A.M. readings below 60° except at our most south-western and south-eastern stations; maxima rising above 70° in S. of Ireland and at Hurst Castle only.

Wind showing no appreciable change beyond drawing rather more easterly in the southern districts.

Sea moderate in the Channel, slight or smooth elsewhere.

Barometer steady till afternoon, when it began to fall in W. and N.W. Readings still highest in Scotland.

Thursday, August 19.

Weather now dull all over the Kingdom, but clearing in the W. and in the S.E. towards night.

Temperature risen generally, most in Scotland, but not very much anywhere. Maxima 69° at Aberdeen, 70° to 75° in the southern parts of England and Ireland, and 60° to 65° elsewhere.

Wind shifting temporarily to S.W. and W. in the N. of Scotland, very light in force, but still light to moderate north-easterly in Ireland and England.

Sea very little disturbed.

Barometer falling in the N. High pressure area inclined to move southwards, and gradients for westerly winds appearing on its northern side.

Friday, August 20.

Weather remaining very dull and gloomy except in the N., especially dull over our inland counties, but again clearing in southern and south-western districts as day advanced. Very slight rain at Cambridge and Jersey.

Temperature rather higher than on 19th; maxima of 69° to 73° in Scotland, and 72° or 73° in southern parts of Ireland and England.

Wind south-westerly to westerly, moderate to light in Scotland; calm in Ireland; north-easterly light to moderate over England. South-westerly wind in the N. lulling towards night.

Sea generally smooth.

Barometer ceased falling in N. and recovery subsequently setting in. High pressure area moving northwards again.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, August 21.

Weather brighter than of late over most of our Islands. Violent thunderstorms and unusually heavy rains in France. Very fine over our south-eastern counties in afternoon, but fast driving scud at night.

Temperature fallen in N. Maxima in Scotland all below 70° (except at Aberdeen) but 78° reached in London and 70° to 75° in Ireland.

Wind calm in Scotland, north-easterly to easterly elsewhere, and blowing very freshly in the S.

Sea rather rough at some Channel stations.

Barometer highest in Scotland, but small well formed depression advancing over France from S.W.

Sunday, August 22.

Weather fine and bright in the N. and N.W., cloudy elsewhere, but finer towards night. Three-quarters of an inch of rain in a thunderstorm at Valentia, and slight rain on our N.E. coasts.

Temperature almost unchanged. Maxima exceeding 70° at most of the western and southern stations, 60° to 66° in the N.

Wind light, northerly in Scotland, north-easterly elsewhere, and rather fresh in the S.

Sea moderately rough at Dover, smooth generally elsewhere.

Barometer still highest in Scotland, lowest over France. Very little change all day.

Monday, August 23.

Weather very dull and gloomy again all over the country, with slight rain in one or two places.

Temperature fallen at most stations, very low over Great Britain generally.

Wind unchanged in direction, and generally light in force; quite calm at many north-western and northern stations, fresh in the Channel.

Sea moderately rough in the Channel.

Barometer still highest in N., lowest over Bay of Biscay, gradients moderate. Barometer very steady all day.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	62	47	54·9	+0·7	3	0·06	−0·49	*	*
	Stornoway	66	50	57·6	+2·9	3	0·59	−0·31	6	6
	Wick	68	50	57·9	+2·2	0	—	−0·66	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	66	57	61·7	+0·4	1	0·05	−0·45	*	*
	Jersey (Noirmont)	72	58	64·0	+1·5	5	0·70	+0·13	15	15

The above observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	73	53	60·9	+4·2	0	—	−0·66	*	*
	Aberdeen	71	48	58·8	+1·8	1	0·07	−0·67	15	15
	Glenalmond	68	45	57·7	+0·7	0	—	?	?	?
	Leith	72	52	60·3	+2·5	1	0·02	−0·54	*	*
2. ENGLAND N.E.	Shields	65	49	57·6	−0·6	3	0·15	−0·41	*	*
	Durham	72	42	56·9	−2·9	3	0·34	−0·21	16	16
	York	68	54	60·3	+0·3	1	0·03	−0·55	14	14
	Spurn Head	66	56	60·1	+0·1	1	0·01	?	*	*
	Kelstern (Lincolnsh.) ℳ	67	50	57·9	−2·5	1	0·02	−0·52	11	11
3. ENGLAND, E.	Hillington ℳ	70	49	61·1	−0·4	2	0·21	−0·21	16	16
	Yarmouth	67	57	62·4	+1·3	1	0·06	−0·39	*	*
	Cambridge	77	55	63·2	+1·1	2	0·03	−0·34	20	20
	Rothamsted	73	53	61·8	−1·0	1	0·03	−0·44	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	68	51	60·0	−0·1	3	0·06	−0·44	*	*
	Nottingham	71	55	61·2	+0·1	2	0·02	−0·65	*	*
	Loughborough	70	55	60·7	−0·4	1	0·02	−0·45	*	*
	Leicester	69	55	60·1	−1·4	1	0·02	−0·55	5	5
	Birmingham (Oscott)	69	52	58·8	−2·4	1	0·01	−0·64	*	*
	Shrewsbury ℳ	68	51	59·5	−1·4	0	—	−0·54	*	*
	Churchstoke ℳ	70	52	59·1	−1·6	0	—	?	2	2
	Hereford ℳ	69	50	59·7	−1·8	0	—	−0·49	*	*
	Cirencester	69	52	60·4	−1·6	0	—	−0·65	12	12
	Oxford	69	53	61·2	−1·1	1	0·01	−0·47	14	14
5. ENGLAND, S.	London†	78	56	65·6	+2·7	0	—	−0·45	25	25
	Marlborough ℳ	71	51	62·4	−0·3	0	—	−0·62	*	*
	Strathfield Turgiss ℳ	76	47	64·1	+1·2	0	—	−0·40	*	*
	Dover	72	60	65·4	+3·4	0	—	−0·48	*	*
	Hastings (St. Leonard's)	78	58	67·2	+5·2	1	0·04	−0·41	*	*
	Southampton	76	53	64·8	+2·4	1	0·19	?	50	51
	Hurst Castle	72	56	64·7	+2·1	1	0·05	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	71	48	61·2	+3·4	0	—	?	*	*
	Glasgow	71	49	59·6	+1·6	0	—	−0·90	13	13
	Ardrossan	73	51	60·7	+2·9	0	—	−0·91	*	*
	Silloth (Cumberland)	73	50	60·3	+1·8	0	—	−0·71	22	22
	Douglas (Isle of Man)	68	50	59·7	+0·6	0	—	−0·79	28	28
7. ENGLAND, N.W.	Barrow-in-Furness	71	54	61·6	+2·6	0	—	?	*	*
	Stonyhurst	71	53	60·2	+0·2	0	—	−1·06	28	28
	Blackpool ℳ	69	47	58·4	−1·3	0	—	−0·58	*	*
	Manchester	68	51	59·8	−0·4	0	—	−0·75	*	*
	Liverpool Obs'y (Bidston)	68	55	61·2	+1·1	0	—	−0·48	*	*
	Llandudno ℳ									
	Holyhead	69	56	61·5	+1·4	0	—	−0·60	*	*
8. ENGLAND, S.W	Pembroke	69	54	61·6	+1·1	0	—	−0·62	50	50
	Barnstaple	78	58	67·1	+6·0	0	—	−0·80	*	*
	Falmouth	69	56	62·4	+0·4	0	—	−0·65	29	30
	Plymouth	74	57	64·8	+2·9	1	0·01	−0·59	*	*
	Prawle Point	71	55	62·3	+0·5	1	0·02	?	*	*
9. IRELAND, N.	Londonderry	75	48	60·9	+2·6	0	—	−0·85	*	*
	Mullaghmore	72	57	62·5	+3·9	0	—	?	*	*
	Markree Castle	74	50	61·9	+3·4	0	—	−0·90	23	23
	Brookeborough	73	50	61·3	+2·7	0	—	?	*	*
	Armagh	68	50	60·5	+1·8	0	—	−0·61	27	27
	Donaghadee	66	52	59·0	+0·1	0	—	?	*	*
10. IRELAND, S	Dublin	67	49	60·3	+1·1	0	—	−0·56	37	37
	Parsonstown	71	47	60·0	+1·2	0	—	−0·81	33	33
	Waterford	72	48	61·1	+1·1	0	—	?	*	*
	Roche's Point	76	55	65·2	+5·1	0	—	−0·82	*	*
	Valentia	72	54	63·8	+3·8	2	0·79	−0·16	55	56
	Foynes	70	51	61·0	+1·5	0	—	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 35.] WEEK ENDING MONDAY, AUGUST 30, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Waterford, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	77	48	60	4 above.	2	1	6 less.	22	22
	2. ENGLAND, N.E.	78	44	61	2 above.	3	3	2 less.	41	41
	3. ENGLAND, E.	78	44	63	1 above.	?2	2	3 less.	34	35
	4. MID. COUNTIES	80	43	63	2 above.	1	2	4 less.	36	37
	5. ENGLAND, S.	81	50	65	4 above.	2	2	3 less.	24	24
Principal Grazing Districts.	6. SCOTLAND, W.	77	49	61	4 above.	1	less than ½	9 less.	43	43
	7. ENGLAND, N.W.	79	47	62	3 above.	1	1	6 less.	45	46
	8. ENGLAND, S.W.	74	53	63	2 above.	2	2	7 less.	39	40
	9. IRELAND, N.	80	46	62	4 above.	1	less than ½	7 less.	36	37
	10. IRELAND, S.	80	48	64	5 above.	2	5	2 less.	43	44

General Remarks.

Weather, though much brighter in most places than during last week, has again been rather dull over the greater part of the Kingdom, especially over the inland counties. Thunderstorms occurred at many stations on the 26th and again in some localities on the 29th. Rather heavy rain fell at some of the inland stations and at Valentia, but elsewhere the amounts collected were very small.

Temperature was above the mean in all districts; in Scotland, Ireland, and in "England, S.," the excess was as much as 4° or 5°. The thermometer was generally highest on the 28th, when it rose to 80° in Ireland and to 81° at Hastings and in London. The lowest of the minima occurred in most places on the 24th, and at Churchstoke a reading as low as 43° was registered.

Rainfall was less than the mean in all districts.

Bright sunshine was more prevalent than during last week, but the number of hours recorded was still decidedly small. The percentage of total possible duration varied from 46 in "England, N.W.," to 24 in "England, S.," and 22 in "Scotland, E."

Wind was generally light from between E. and N. On the 26th, however, a southerly breeze set in over Scotland and continued to prevail there during the remainder of the period.

Q 2765. 100.—9/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending August 30, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, August 24.

Weather differing very little from that reported on 23rd; sky overcast and dull in most places, and some rain falling in the E. of Scotland and on our S. and S.W. coasts later on.

Temperature rising above 70° during day in Ireland, but maxima over England only 65° to 69°.

Wind continuing very light from N. in Scotland, moderate from N.E. over England and Ireland.

Sea moderate in the Channel, smooth elsewhere.

Barometer uniformly rather high over our northern districts, rather lower over France and the Peninsula; very steady all day.

Wednesday, August 25.

Weather fine on our E. coasts, very dull elsewhere. Air close and appearance unsettled. Slight rain in N. later on, and thunderstorms over our southern districts.

Temperature risen a little in morning, but the maxima over England nowhere above 70°, while those in Ireland were several degrees lower than on 24th; night mild and close.

Wind drawing into S.E. all along our western coasts, but remaining north-easterly in the E., calm in Scotland.

Sea smooth generally, moderate off Prawle Point.

Barometer beginning to fall, most in S.W. High pressure area in N. becoming smaller and moving eastward. Depressions appearing off our S.W. coasts, and extending eastwards up the Channel.

Thursday, August 26.

Weather very dull everywhere, and exceedingly close and thundery at our southern stations. Slight rain in the N.E. later, and severe thunderstorm at York.

Temperature slightly higher at 8 A.M. than on Wednesday, and rising to a little above 70° in many parts of England, and to 74° at Roche's Point during the day.

Wind varying greatly over England, but still chiefly easterly. Southerly winds becoming still more general in the west.

Sea moderate off our S.W. coasts, smooth elsewhere.

Barometer beginning to rise in S., and the rise gradually extending northwards. Irregularly formed depressions in S. and S.W., subsequently dispersing slowly.

Friday, August 27.

Weather improving in the W. and afterwards in the N.; still very dull and gloomy elsewhere, but rather less sultry. Thunderstorms in eastern counties later on.

Temperature changing very irregularly,—fallen in the southern districts. Rising very considerably in N. and W. during day, maxima of 74° to 78° being recorded in those districts, but only 70° in London.

Wind still north-easterly to easterly over England, calm in Ireland and Scotland. North-westerly breezes subsequently appearing in Ireland, and south-westerly and southerly in Scotland.

Sea smooth.

Barometer risen generally. Anticyclone now over Scandinavia, and band of high pressure over our Islands. New high pressure area forming in W.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, August 28.

Weather greatly improved; sky still cloudy inland, but afterwards clearing and the weather becoming exceedingly fine almost everywhere. Thunderstorm at mouth of Channel.

Temperature little changed at first but subsequently rising to 81° in London, 80° at Roche's Point, and 75° to 79° in many parts of England.

Wind southerly in Scotland, easterly elsewhere, and light to moderate in force.

Sea smooth generally.

Barometer still highest over Scandinavia and North Sea, but readings becoming more and more uniform; the lowest reported from the S. of France.

Sunday, August 29.

Weather very fine in most places during day, but severe thunderstorm at Nottingham in evening, and heavy rain (2 inches) locally at Valentia. Much lightning over our southern counties in evening, and very severe thunderstorms in the southern parts of France.

Temperature higher in morning than at same hour on Saturday, but the maxima not nearly so high.

Wind still southerly in the N., easterly to north-easterly elsewhere, and falling light. Wind again beginning to veer southward in the W. later on.

Sea moderate to smooth.

Barometer still highest in N.E., lowest over France, and beginning to fall decidedly—most in S.

Monday, August 30.

Weather fine generally over the whole of western Europe, and sky clear in most places.

Temperature showing no important change at 8 A.M., but maxima rather higher than on 29th.

Wind veering to southward in all western and northern districts, and the easterly wind over England lulling to calm.

Sea smooth except at Valentia and Yarmouth.

Barometer still highest over Scandinavia and North Sea, lowest in France, and falling generally. Recovery commencing over Bay of Biscay later and extending northwards and eastwards. Fall in N. continuing.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	66	50	57·6	+3·5	5	0·20	−0·35	*	*
	Stornoway	72	50	60·6	+6·6	0	—	−0·96	51	51
	Wick	67	48	58·4	+3·2	1	0·03	−0·66	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	70	57	62·9	+2·2	1	0·02	−0·63	*	*
	Jersey (Noirmont)	72	57	64·5	+2·5	2	0·11	−0·49	31	32

The above observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	77	49	61·0	+5·0	1	0·01	−0·69	*	*
	Aberdeen	71	50	60·1	+3·8	3	0·13	−0·63	22	22
	Glenalmond	74	48	59·0	+2·9	0	—	?	?	?
	Leith	73	48	60·0	+3·1	2	0·06	−0·53	*	*
2. ENGLAND N.E.	Shields	67	53	59·4	+1·8	3	0·22	−0·37	*	*
	Durham	70	44	58·8	−0·1	3	0·15	−0·40	22	22
	York	75	51	62·5	+3·3	2	0·44	−0·19	63	64
	Spurn Head	70	56	61·8	+2·6	2	0·05	?	*	*
	Kelstern (Lincolnsh.) ✠	78	53	62·0	+2·0	3	0·78	+0·23	37	38
3. ENGLAND, E.	Hillington ✠	78	46	62·9	+1·4	2	0·27	−0·31	35	36
	Yarmouth	69	44	61·4	+0·9	2	0·09	−0·41	*	*
	Cambridge	78	45	62·9	+1·7	3	0·38	−0·02	32	33
	Rothamsted	77	51	63·0	+1·1	?	0·04	−0·46	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	76	54	63·0	+3·8	3	0·32	−0·20	*	*
	Nottingham	77	52	64·5	+4·2	1	1·06	+0·47	*	*
	Loughborough	80	47	64·7	+4·4	1	0·05	−0·47	*	*
	Leicester	77	49	63·2	+2·5	1	0·10	−0·50	28	29
	Birmingham (Oscott)	75	47	62·1	+1·6	1	0·06	−0·63	*	*
	Shrewsbury ✠	76	47	60·1	0·0	0	—	−0·55	*	*
	Churchstoke ✠	74	43	60·0	0·0	0	—	?	39	40
	Hereford ✠	75	50	62·4	+1·4	0	—	−0·55	*	*
	Cirencester	? 77	50	? 63·8	? +2·6	1	0·44	−0·26	40	41
	Oxford	75	49	63·1	+1·6	2	0·03	−0·48	?	?
5. ENGLAND, S.	London†	81	55	65·2	+3·0	1	0·02	−0·47	15	15
	Marlborough ✠	77	50	63·8	+1·9	3	0·43	−0·27	*	*
	Strathfield Turgiss ✠	79	50	64·7	+2·7	4	0·56	+0·11	*	*
	Dover	73	61	65·9	+4·4	2	0·18	−0·32	*	*
	Hastings (St. Leonard's)	81	58	67·5	+6·0	3	0·07	−0·42	*	*
	Southampton	78	55	65·9	+4·4	1	0·11	?	32	33
	Hurst Castle	75	56	64·4	+2·4	1	0·08	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	73	49	60·4	+4·3	2	0·06	?	*	*
	Glasgow	74	50	60·6	+3·4	0	—	−0·95	30	30
	Ardrossan	76	53	62·1	+4·8	0	—	−0·99	*	*
	Silloth (Cumberland)	77	49	61·6	+3·7	1	0 02	−0·74	51	52
	Douglas (Isle of Man)	76	53	61·6	+3·0	0	—	−0·80	47	48
7. ENGLAND, N.W.	Barrow-in-Furness	79	53	63·6	+4·9	1	0·03	?	*	*
	Stonyhurst	75	53	62·4	+3·4	1	0·19	−0·92	45	46
	Blackpool ✠	77	47	61·1	+2·2	0	—	−0·70	*	*
	Manchester	74	53	62·2	+2·8	1	0·47	−0·33	*	*
	Liverpool Obsr (Bidston)	75	53	63·5	+4·0	0	—	−0·59	*	*
	Llandudno ✠	71	53	61·6	+2·1	0	—	?	44	45
	Holyhead	70	57	62·3	+3·0	0	—	−0·68	*	*
8. ENGLAND, S.W	Pembroke	73	55	62·7	+2·8	1	0·13	−0·57	45	46
	Barnstaple	?	?	?	?	?	?	?	*	*
	Falmouth	70	58	62·8	+1·3	3	0·03	−0·72	32	33
	Plymouth	72	53	63·5	+2·2	2	0·14	−0·66	*	*
	Prawle Point	74	55	62·2	+1·1	2	0·38	?	*	*
9. IRELAND, N.	Londonderry	80	49	63·1	+5·9	1	0·15	−0·70	*	*
	Mullaghmore	72	58	63·8	+5·8	0	—	?	*	*
	Markree Castle	76	47	61·9	+4·0	0	—	−0·87	36	37
	Brookeborough	80	46	62·3	+4·5	0	—	?	*	*
	Armagh	73	52	61·8	+3·9	1	0·04	−0·61	35	36
	Donaghadee	68	54	60·2	+2·0	0	—	?	*	*
10. IRELAND, S	Dublin	70	54	61·9	+3·4	2	0·16	−0·40	41	42
	Parsonstown	77	50	62·5	+4·5	1	0·07	−0·76	39	40
	Waterford	78	48	65·7	+6·9	2	0·07	?	*	*
	Roche's Point	80	54	66·1	+6·9	1	0·15	−0·74	*	*
	Valentia	74	53	62·8	+3·7	4	2·04	+1·04	48	50
	Foynes	74	50	62·2	+3·7	3	0·29	?	*	*

Stations marked ✠ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.
† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 36.] WEEK ENDING MONDAY, SEPTEMBER 6, 1880. [*Price 2d.* [*Annual subscription, post paid*, 12*s.* 6*d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Geldeston, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Waterford, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.)				Rainfall. (Amounts in tenths of an inch.)			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	77	43	62	6 above.	2	1	6 less.	51	54
	2. ENGLAND, N.E.	81	50	65	7 above.	2	1	6 less.	56	60
	3. ENGLAND, E.	88	49	68	7 above.	1	less than ½	5 less.	56	61
	4. MID. COUNTIES	88	47	66	6 above.	1	1	6 less.	49	53
	5. ENGLAND, S.	87	46	65	4 above.	1	2	4 less.	49	53
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	82	45	61	5 above.	4	5	5 less.	35	38
	7. ENGLAND, N.W.	82	50	64	6 above.	2	3	6 less.	36	39
	8. ENGLAND, S.W.	86	49	64	4 above.	2	1	8 less.	45	48
	9. IRELAND, N.	81	43	62	5 above.	3	1	7 less.	37	39
	10. IRELAND, S.	78	51	64	6 above.	4	4	4 less.	37	40

General Remarks.

Weather during this period has been generally very fine and summerlike over the whole of Great Britain. In Ireland and the W. of Scotland, however, it was rather less settled than elsewhere, and some slight showers occurred. Lightning was seen in many places during the latter part of the week and in some instances was accompanied by thunder.

Temperature was above the mean in all districts; in "England, S.," and "England, S.W.," the excess was 4°, but in nearly all other places as much as 6° or 7°. The maxima were higher than during any other week of this year, and on the 4th a reading of 88° was registered at Nottingham and Cambridge, and 87° at Loughborough and in London. The nights were generally mild, but during those of the 1st and 6th the thermometer went down to between 43° and 47° at many of our inland stations.

Rainfall was again less than the mean in all districts.

Bright sunshine, in all places except "Ireland, S.," shows a decided increase. The number of hours recorded was greater at our southern, central, and eastern stations than elsewhere, the percentage of total possible duration varying from 61 in "England, E.," to 38 in "Scotland, W."

Wind was rather variable in direction, but generally southerly or south-westerly; on the 3rd and 4th, however, an easterly breeze was experienced in the S. and S.W. In force the wind was light or moderate in most places, but on the 4th and 6th it blew rather strongly at some of our western and north-western stations, and at Stornoway reached the force of a gale.

Q 2853. 100.—9/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending September 6, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, August 31.

Weather very fine except in the S.W. of Ireland; dull at first inland but then clearing.

Temperature rising; change occurring first in the W. and N., and attaining to maxima of 75° to 79° over England during the day.

Wind variable; northerly airs prevailing over our eastern and south-eastern counties, but southerly breezes settling in over our western and northern districts.

Sea rather rough at Valentia, but generally smooth on our other coasts.

Barometer.—Pressure giving way in the W. and N.W., but increasing elsewhere; readings varying from 30·3 in. over Sweden to 30·0 in. off our western coasts. Shallow depression over Holland.

Wednesday, September 1.

Weather dull and rather rainy in the W. and N.W., foggy in the S.W., fine and bright elsewhere; considerable improvement in W. later on

Temperature higher than at 8 A.M. on 31st, but not rising so high by several degrees during the day, except at Cambridge.

Wind south-westerly in most places and light in force, but north-westerly in the W. of Ireland in rear of a small subsidiary depression.

Sea rather rough in the far N., moderate in the S.W., smooth elsewhere.

Barometer.—Pressure now highest (30·3 in.) over the N. of France, lowest to north-westward of Scotland. Primary depression off the Hebrides; secondary over Ireland; both moving north-eastwards.

Thursday, September 2.

Weather dull again in Ireland and many parts of England, foggy in S., afterwards clearing in the S. and E., but remaining dull in the W. and N.W., with some rain.

Temperature changing irregularly in morning, but rising rapidly later on, and reaching 80° to 82° over the inland parts of England.

Wind variable from S.W. over Great Britain, but backing to S. in Ireland, and subsequently becoming south-south-westerly in almost all places.

Sea a little rough in the S.W., very smooth in the N.E., E., and S.

Barometer.—Pressure still high in France and subsidiary anticyclone found over England. Barometer subsequently falling a little, most in extreme N.W.; depression moving north-eastward past the Hebrides.

Friday, September 3.

Weather still dull in Ireland, very fine and bright elsewhere, and dry generally.

Temperature rising except in Ireland, and reaching 80° to 85° over England during the day, but only 69° to 73° in Ireland.

Wind southerly, S.E. to S.W., light to moderate in force, but afterwards freshening in the W.

Sea rough off the W. of Norway, moderate to smooth on our own coasts.

Barometer highest over Germany, France, and England. Depressions off the W. of Ireland, moving northwards and north-eastwards.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, September 4.

Weather brilliantly fine except in extreme W. and N.W. where it was more cloudy, and slight rain fell later on. A great deal of lightning seen over England at night.

Temperature again rising except in Scotland, and reaching 88° in many parts of England. (The warmest day this year).

Wind still southerly, and blowing freshly in the W.; subsequently veering to S.W. or W. over our southern counties.

Sea rough off the W. of Ireland.

Barometer falling generally; still highest in S.E. Depressions in W. again, moving northward, and subsidiary disturbance over Bay of Biscay, moving north-eastwards to England.

Sunday, September 5.

Weather much more cloudy than of late, with slight rain in most places during the day.

Temperature higher at 8 A.M. than on the 4th, but not rising nearly so high during day; maxima only 79° even at warmest stations in England.

Wind veering to S.W. and W.S.W., and freshening greatly in the western districts.

Sea rough off the S.W. of Norway; moderate to smooth on our coasts.

Barometer highest in France, lowest to northward of Scotland. Depressions in far N. moving north-eastwards towards Norway; subsidiary disturbances over our Islands.

Monday, September 6.

Weather less cloudy than on 5th but still rather changeable, and showery in the N. and also in the S. later on, with some lightning.

Temperature still falling everywhere.

Wind south-westerly to westerly in our Islands, south-easterly over Bay of Biscay; blowing strongly in the N.W. later on.

Sea rough both in the N.W. and S.W.

Barometer highest over France. Large depression off our N.W. coasts, smaller one over Bay of Biscay. Both moving north-eastwards during day.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	68	50	58·5	+4·8	4	0·23	−0·31	*	*
	Stornoway	69	52	60·3	+6·5	3	0·38	−0·63	32	33
	Wick	73	47	60·7	+6·1	3	0·07	−0·63	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	72	56	64·5	+4·3	1	0·06	−0·74	*	*
	Jersey (Noirmont)	81	51	65·4	+4·1	3	0·75	+0·12	45	49

The above observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	75	45	61·5	+6·5	2	0·11	−0·60	*	*
	Aberdeen	77	52	63·6	+7·9	1	0·05	−0·75	51	54
	Glenalmond	77	43	60·2	+4·6	3	0·25	?	?	?
	Leith	77	50	62·1	+6·1	1	0·03	−0·57	*	*
2. ENGLAND N.E.	Shields	77	53	63·5	+6·5	2	0·06	−0·54	*	*
	Durham	81	51	63·8	+5·8	2	0·12	−0·47	46	49
	York	80	50	65·8	+7·3	2	0·03	−0·67	64	68
	Spurn Head	75	55	65·6	+7·1	0	—	?	*	*
	Kelstern (Lincolnsh.) ℳ	81	52	65·6	+6·6	1	0·03	−0·56	58	62
3. ENGLAND, E.	Hillington ℳ	85	49	68·2	+8·2	1	0·03	−0·62	51	55
	Yarmouth	78	54	67·9	+7·9	1	0·04	−0·56	*	*
	Geldeston	83	51	67·7	+7·4	0	—	?	60	65
	Cambridge	88	50	68·5	+8·0	1	0·01	−0·46	58	62
	Rothamsted	83	49	66·1	+5·2	4	0·05	−0·50	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	85	47	65·3	+6·9	1	0·03	−0·53	*	*
	Nottingham	88	49	68·1	+8·9	1	0·02	−0·68	*	*
	Loughborough	87	52	68·2	+8·7	0	—	−0·61	*	*
	Leicester	84	51	66·7	+6·9	2	0·06	−0·55	54	58
	Birmingham (Oscott)	85	51	66·2	+6·5	0	—	−0·74	*	*
	Shrewsbury ℳ	83	47	63·6	+4·5	2	0·12	−0·44	*	*
	Churchstoke ℳ	81	51	63·5	+4·0	1	0·05	?	37	40
	Hereford ℳ	82	47	63·9	+3·7	1	0·07	−0·57	*	*
	Cirencester	83	48	65·8	+5·2	1	0·12	−0·63	49	53
	Oxford	83	53	66·3	+5·7	3	0·04	−0·53	57	61
5. ENGLAND, S.	London†	87	52	68·1	+7·8	1	0·12	−0·41	47	51
	Marlborough ℳ	85	46	65·2	+4·2	3	0·06	−0·73	*	*
	Strathfield Turgiss ℳ	85	50	65·3	+4·1	1	0·04	−0·50	*	*
	Dover	77	56	65·6	+4·5	1	0·23	−0·33	*	*
	Hastings (St. Leonard's)	78	57	65·3	+4·3	1	0·59	+0·04	*	*
	Southampton	81	50	64·9	+3·9	1	0·20	?	50	54
	Hurst Castle	76	52	63·0	+1·7	1	0·12	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	72	46	61·3	+6·1	6	0·97	?	*	*
	Glasgow	78	45	61·5	+5·0	4	0·29	−0·71	36	38
	Ardrossan	78	47	61·0	+4·4	3	0·65	−0·36	*	*
	Silloth (Cumberland)	82	48	63·3	+6·3	3	0·30	−0·50	39	42
	Douglas (Isle of Man)	74	50	59·3	+1·5	5	0·34	−0·46	31	33
7. ENGLAND, N.W.	Barrow-in-Furness	80	55	64·0	+6·0	2	0·24	?	*	*
	Stonyhurst	79	53	64·4	+6·3	4	0·49	−0·70	37	39
	Blackpool ℳ	82	50	63·6	+5·6	3	0·28	−0·51	*	*
	Manchester	81	50	64·5	+5·3	1	0·21	−0·64	*	*
	Liverpool Obsy (Bidston)	82	55	65·4	+6·6	2	0·20	−0·55	*	*
	Llandudno ℳ	82	55	64·4	+5·9	2	0·16	?	35	38
	Holyhead	78	56	63·3	+4·8	3	0·42	−0·33	*	*
8. ENGLAND, S.W	Pembroke	73	54	62·5	+3·5	5	0·13	−0·67	43	46
	Barnstaple	86	49	68·0	+8·0	0	—	−0·95	*	*
	Falmouth	71	57	63·4	+2·6	2	0·04	−0·65	46	50
	Plymouth	79	51	63·5	+2·8	2	0·05	−0·75	*	*
	Prawle Point	74	55	62·7	+2·2	2	0·06	?	*	*
9. IRELAND, N.	Londonderry	81	47	62·7	+6·2	4	0·11	−0·75	*	*
	Mullaghmore	77	55	64·1	+6·9	4	0·10	?	*	*
	Markree Castle	77	43	60·9	+3·9	4	0·15	−0·69	36	38
	Brookeborough	79	46	62·0	+5·1	0	—	?	*	*
	Armagh	75	50	62·1	+4·9	3	0·07	−0·63	37	39
	Donaghadee	70	47	60·0	+2·5	5	0·16	?	*	*
10. IRELAND, S	Dublin	75	51	64·2	+6·3	3	0·17	−0·38	48	52
	Parsonstown	78	51	63·7	+6·5	3	0·25	−0·60	36	39
	Waterford								*	*
	Roche's Point	74	53	65·1	+6·5	7	0·73	−0·25	*	*
	Valentia	69	55	63·5	+5·3	4	0·82	−0·27	28	30
	Foynes	76	51	62·0	+4·3	3	0·09	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory.

Note.—Geldeston has been added to the list of stations in "England, E."

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 37.] WEEK ENDING MONDAY, SEPTEMBER 13, 1880. [*Price 2d.*

[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Geldeston, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Waterford, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.)				Rainfall. (Amounts in tenths of an inch.)			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	69	41	56	1 above.	3	11	3 more.	33	36
	2. ENGLAND, N.E.	74	44	59	1 above.	3	20	13 more.	44	49
	3. ENGLAND, E.	79	39	60	0 (average).	3	13	9 more.	43	48
	4. MID. COUNTIES	79	37	58	0 (average).	5	17	12 more.	35	39
	5. ENGLAND, S.	80	45	61	1 above.	5	19	11 more.	31	34
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	69	39	57	1 above.	5	10	2 less.	43	48
	7. ENGLAND, N.W.	69	43	59	1 above.	5	11	2 more.	38	42
	8. ENGLAND, S.W.	74	50	60	1 above.	6	14	6 more.	29	33
	9. IRELAND, N.	67	38	56	0 (average).	5	11	3 more.	42	47
	10. IRELAND, S.	70	42	58	1 above.	5	13	3 more.	36	40

General Remarks.

Weather was generally fine during the first two days, but afterwards became very unsettled and rainy in all parts of the Kingdom. In most parts of England the rain was very heavy, and on the 12th was accompanied by thunder.

Temperature was slightly above the mean in most districts, but in "England, E.," the "Midland Counties," and "Ireland, N." readings were about their mean value. The thermometer was highest on the 10th, when it rose to 80° in London and to between 75° and 79° in several other parts of England. The minima were rather low, and at some of our inland stations were as low as 37° or 38°. At Silloth the thermometer exposed on the grass fell to 30° during the early morning of the 8th.

Rainfall was rather less than the mean in "Scotland, W.," but more in all other districts. Over the southern, central, and eastern parts of England the excess was very great, owing chiefly to the heavy falls which occurred on the 11th and 12th.

Bright sunshine shows a slight increase in Ireland, but a decided decrease elsewhere. The percentage of total possible duration ranged from 48 in "England, E.," and "Scotland, W.," to 33 in "England, S.W."

Wind was generally westerly or north-westerly on the 7th and 8th, but shifted to the south-eastward on the 9th, and to the southward on the 10th, and during the remainder of the period blew, with slight interruptions, from the westward or southward. In force it was generally moderate or light, but occasionally blew rather freshly at some of our north-western stations.

Q 2918. 100.—9/80. Wt. 26 E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending September 13, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, September 7.

Weather fine generally over the United Kingdom, with cool refreshing air; in many places sky perfectly cloudless.

Temperature fallen everywhere, the 8 A.M. readings being below 60° at most of our stations, and the maxima below 70°, except in London.

Wind westerly to north-westerly; moderate to fresh over our northern districts, light in the S. Subsequently veering to N.E. on our S.W. coasts.

Sea rough in extreme N.W. and N.

Barometer rising briskly. Two depressions reported; the larger off the W. of Norway, the smaller over Belgium. Both moving north-eastward, and pressure becoming very uniform over the United Kingdom and France.

Wednesday, September 8.

Weather very fine and cool at first, except in the W. of France and on our S.W. coasts, where a new spell of rain began to set in. Showery weather subsequently extending over France and our southern coasts, with thunder in some places.

Temperature again fallen, and maxima below 70° throughout our Islands, notwithstanding sunshine.

Wind shifting to E. and N.E. over Ireland and S. of England, calm in the N.; south-easterly in Bay of Biscay, and afterwards veering to W., and blowing strongly.

Sea rough in the S.W. and at Christiansund.

Barometer ceased rising. Anticyclone lying over Scotland, and new depression appearing over Bay of Biscay, and travelling northwards.

Thursday, September 9.

Weather still fair at several places in the morning, but on the whole unsettled and rainy over the southern and western districts, clear in the North.

Temperature higher at 8 A.M. than on the 8th, except in Scotland. Maxima reported of 72° at Nottingham, and 70° at Valentia, but elsewhere readings all below 70°.

Wind generally easterly to south-easterly, and blowing strongly in W. Southerly breezes prevailing in the W. of France, and extending to our southern and south-western counties later on.

Sea rough in the W. and S.W.

Barometer uniformly high over the North Sea and Norway. Depression noticed on the 8th had reached Scilly by 8 A.M., and moving north-westwards lay off the W. of Ireland by 6 P.M.

Friday, September 10.

Weather at 8 A.M. very fine in the E. and S.E., dull, unsettled, and very rainy in the W. Rain falling subsequently in nearly all parts of the Kingdom.

Temperature risen considerably; maxima recorded being as high as 80° in London, and 78° or 79° over other parts of our inland counties.

Wind southerly in the W. and N., light from S. in the Channel and moderate from S.E. on our south-eastern and eastern coasts. Wind subsequently veering to S.W. and W. in the Channel and blowing freshly.

Sea rough in the W. and off Brest.

Barometer highest over Sweden, lowest off our N.W. coasts; the depression recently noticed now growing deep and travelling north-eastwards by our northern coasts. Subsidiary depression crossing England later.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, September 11.

Weather becoming extremely unsettled and changeable; dull and showery during day. Torrents of rain in France and spreading to the English stations later. One to two inches of rain in several places.

Temperature fallen considerably; maxima 69° to 72° over England, lower still elsewhere.

Wind south-westerly in the W. and N., light westerly in the Channel, southerly on our E. coast. Subsequently shifting temporarily to E. and N.E. over England, and afterwards to W. again with some local squalls.

Sea rough in the N. only.

Barometer rising Ireland, falling elsewhere. Depression in N.W. passing slowly away, but small new one appearing over Bay of Biscay and travelling quickly to north-north-eastward over France and England during next 24 hours.

Sunday, September 12.

Weather exceedingly changeable and unsettled, though fine at first over greater part of England; heavy rains again in all districts, exceeding an inch in many places.

Temperature still falling generally; maxima 68° to 70° at some inland stations, 60° to 65° elsewhere.

Wind extremely variable in the W. and N. Chiefly south-westerly in the S. but backing to S.E. again later on.

Sea smooth in the W. and S., moderate off our S.W. coasts.

Barometer oscillating a good deal; pressure lowest in N.W.; a well-formed depression off our N.E. coasts, and others appearing later on and travelling north-north-eastwards.

Monday, September 13.

Weather still in a very changeable state, but inclined to improve in the W. and S. Improvement, however, very temporary, and even in London sky looking very angry at night, with double halo.

Temperature still inclined to fall generally; maxima all very low.

Wind at 8 A.M. westerly to north-westerly over Ireland, England, and France, calm in Scotland, south-easterly on eastern shores of North Sea. Wind backing to southward at Valentia in evening, with sudden fall of barometer.

Sea rough in N. and rising in S.W. at night.

Barometer high both in Sweden and off our S.W. coasts, low in extreme N.W., with secondary depression off the Northumberland coast. New and deep depression approaching Ireland at night.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	62	44	54·3	+1·2	5	3·09	+2·57	*	*
	Stornoway	62	45	54·6	+1·6	4	0·83	−0·22	?	?
	Wick	68	43	55·2	+1·4	4	2·02	+1·32	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	66	55	60·9	+1·3	7	1·26	+0·31	*	*
	Jersey (Noirmont)	70	54	62·4	+1·8	6	3·85	+3·19	34	38

The above observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	67	41	55·4	+1·2	2	0·39	−0·33	*	*
	Aberdeen	65	43	55·8	+0·7	4	1·96	+1·16	33	36
	Glenalmond	66	42	53·3	−1·7	4	1·65	?	?	?
	Leith	69	43	58·1	+2·9	2	0·53	−0·07	*	*
2. ENGLAND N.E.	Shields	66	46	57·6	+1·4	4	1·82	+1·20	*	*
	Durham									
	York	74	46	59·3	+1·7	3	2·14	+1·43	42	47
	Spurn Head	67	54	60·4	+2·8	3	2·23	?	*	*
	Kelstern (Lincolnsh.) ℳ	74	44	58·0	−0·2	3	1·79	+1·19	46	51
3. ENGLAND, E.	Hillington ℳ	78	39	58·8	−0·2	2	1·60	+0·94	40	44
	Yarmouth	69	50	60·7	+1·4	3	0·25	−0·42	*	*
	Geldeston	76	45	60·7	+1·3	2	0·34	?	54	60
	Cambridge	79	47	60·7	+1·1	3	1·78	+1·26	36	40
	Rothamsted	75	44	58·0	−2·0	5	2·31	+1·71	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	76	41	59·3	+1·6	4	2·13	+1·53	*	*
	Nottingham	79	42	60·2	+1·8	4	2·17	+1·46	*	*
	Loughborough	76	39	59·2	+0·5	5	2·46	+1·77	*	*
	Leicester	76	43	58·3	−0·5	3	1·94	+1·33	42	47
	Birmingham (Oscott)	73	44	58·4	−0·3	5	1·35	+0·55	*	*
	Shrewsbury ℳ	70	37	56·0	−2·3	5	0·57	−0·03	*	*
	Churchstoke ℳ	67	38	55·9	−0·1	4	0·63	?	33	37
	Hereford ℳ	70	42	57·9	−1·2	5	1·45	+0·70	*	*
	Cirencester	70	42	58·0	−1·7	5	2·24	+1·43	27	30
	Oxford	73	47	58·9	−0·7	5	2·22	+1·58	36	40
5. ENGLAND, S.	London†	80	49	62·9	+2·5	3	2·12	+1·53	31	34
	Marlborough ℳ	72	45	58·5	−1·4	5	2·22	+1·36	*	*
	Strathfield Turgiss ℳ	73	45	59·4	−1·0	4	2·48	+1·87	*	*
	Dover	70	54	61·7	+1·3	6	0·77	+0·12	*	*
	Hastings (St. Leonard's)	71	53	62·2	+1·9	4	1·14	+0·54	*	*
	Southampton	72	51	60·4	+0·4	5	2·33	?	31	34
	Hurst Castle	70	50	61·4	+1·0	6	1·95	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	69	44	55·8	+1·4	5	1·63	?	*	*
	Glasgow	65	46	55·8	+0·5	4	0·60	−0·46	37	41
	Ardrossan	69	45	56·8	+1·0	5	0·56	−0·47	*	*
	Silloth (Cumberland)	68	39	57·8	+1·6	4	1·37	+0·49	41	45
	Douglas (Isle of Man)	64	42	57·1	+0·1	5	0·64	−0·17	51	57
7. ENGLAND, N.W.	Barrow-in-Furness	66	50	59·4	+2·4	4	0·91	?	*	*
	Stonyhurst	68	48	57·3	0·0	5	1·22	−0·07	38	42
	Blackpool ℳ	69	43	58·2	+1·1	5	1·54	+0·65	*	*
	Manchester	69	47	58·6	+0·8	5	1·53	+0·58	*	*
	Liverpool Obsʸ (Bidston)	69	52	59·7	+1·7	5	0·84	−0·08	*	*
	Llandudno ℳ									
	Holyhead	68	54	59·5	+1·6	4	0·45	−0·35	*	*
8. ENGLAND, S.W	Pembroke	66	51	58·9	+0·4	5	1·19	+0·30	34	38
	Barnstaple	74	50	63·5	+4·3	4	1·12	+0·11	*	*
	Falmouth	66	52	60·7	+0·7	7	1·48	+0·78	24	27
	Plymouth	67	50	59·6	−0·3	6	2·18	+1·23	*	*
	Prawle Point	68	50	59·1	−0·8	6	1·09	?	*	*
9. IRELAND, N.	Londonderry	66	40	55·1	−0·5	6	0·94	+0·07	*	*
	Mullaghmore	66	47	57·7	+1·6	5	0·97	?	*	*
	Markree Castle	67	38	53·8	−2·2	5	0·76	−0·04	37	41
	Brookeborough	67	41	55·6	−0·4	5	1·21	?	*	*
	Armagh	65	44	56·2	−0·3	5	1·64	+0·94	47	52
	Donaghadee	67	42	56·7	+0·1	4	0·77	?	*	*
10. IRELAND, S	Dublin	65	47	57·9	+0·9	4	0·56	+0·01	39	43
	Parsonstown	66	42	55·5	−0·7	3	0·87	+0·02	33	37
	Waterford	66	42	57·0	0·0	6	1·85	?	*	*
	Roche's Point	67	52	59·3	+1·5	?	?	?	*	*
	Valentia	70	50	60·1	+2·9	6	2·07	+0·91	37	41
	Foynes	70	46	56·7	−0·2	3	1·34	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.
† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

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The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Geldeston, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Waterford, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	65	36	52	2 below.	5	9	2 more.	34	39
	2. ENGLAND, N.E.	66	40	54	3 below.	2	22	16 more.	30	34
	3. ENGLAND, E.	67	42	54	4 below.	6	22	16 more.	33	38
	4. MID. COUNTIES	69	40	55	3 below.	6	19	12 more.	31	35
	5. ENGLAND, S.	68	40	56	3 below.	7	22	12 more.	31	36
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	64	39	53	2 below.	6	19	10 more.	33	37
	7. ENGLAND, N.W.	68	43	55	2 below.	6	14	5 more.	24	27
	8. ENGLAND, S.W.	68	43	57	2 below.	6	15	5 more.	29	34
	9. IRELAND, N.	64	39	52	3 below.	6	12	1 more.	32	37
	10. IRELAND, S.	66	39	55	2 below.	5	10	2 more.	35	40

General Remarks.

Weather has been cloudy, unsettled, and very rainy in all parts of the Kingdom. Thunderstorms occurred at several stations on the 14th, and again on the 18th and 19th.

Temperature was a few degrees below the mean in all districts. The maxima were all very low, the highest reading registered being 69°, which was recorded at Loughborough on the 16th. The lowest of the minimum readings (36°) occurred at Glenalmond on the 20th; elsewhere the minima were generally 39° or 40°. A frost was experienced on the grass in London early on the morning of the 20th, but the sheltered thermometer, at four feet from the ground, did not fall below 41°.

Rainfall was more than the mean in all districts; over Ireland, "Scotland, E.," and the western parts of England the excess was not great, but over the greater part of England and in "Scotland, W.," the fall was very heavy.

Bright sunshine was less prevalent in most districts than during last week. The registered percentage of total possible duration was greatest (40) in "Ireland, S.," and least (27) in "England, N.W."

Wind at the commencement of the period circulated round a depression over the S. of Ireland, being strong from S. or S.E. in England, light from E. in Scotland, and strong from N. at Valentia. During the 15th and 16th northerly gales or strong winds were felt in nearly all parts of the Kingdom, but by the 17th the wind had moderated, and backed to W. or S.W. at all stations, and continued in that direction, blowing strongly in the S., during the 18th and 19th. On the 20th the wind was moderate from N.W. on all our coasts.

Q 2969. 100.—9/80. Wt. 26. E. & S.

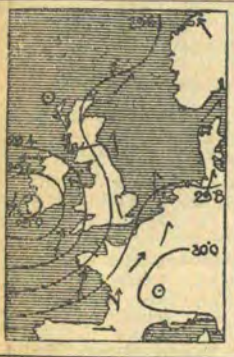
II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending September 20, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.



Tuesday, September 14.

Weather fair over Scotland, N. Germany, and parts of France, but dull and very unsettled elsewhere, with rain at several stations. Very rainy and unsettled over the whole Kingdom all day.

Temperature risen in the W. and S., fallen elsewhere; ranging from 47° at Aberdeen to 60° at Scilly. Maxima below 60° in the N. and W., between 60° and 65° elsewhere.

Wind south-westerly over France and the Channel, southerly over central England, and south-easterly to easterly on our N.W. coasts. Blowing strongly generally and reaching a gale in the S.W. and N.W. Gale extending to our S.E. and E. coasts later.

Sea high in the S.W., rough in the W. and S.

Barometer falling except in Scandinavia and the N. of Scotland—quickly in Ireland. Deep depression shown near Valentia. Disturbance moving south-eastward to Cornwall later, and barometer rising in N.W.

Wednesday, September 15.

Weather fine in the Hebrides, wet, dull, and unsettled in nearly all other parts of western Europe. Wet and unsettled all day except in the N. of Scotland.

Temperature risen in Scotland, changed little and irregularly elsewhere. Readings uniform, ranging between 52° and 61°. Maxima again below 60° in the W. and N. and between 60° and 65° in our other districts.

Wind strong to a gale in all places except the central and south-eastern parts of England—blowing from N. on most of our coasts, from W. over France and the Channel, and from S. over the North Sea. Northerly gale holding all day.

Sea rough in the W. and S., high in the S.W.

Barometer risen briskly on our N. and W. coasts, fallen quickly over the S.E. of England and the countries to the eastward of the North Sea. Depression noticed above shown over our S.E. coasts. Pressure increasing all day and depression travelling a little eastwards.

Thursday, September 16.

Weather still very unsettled; moderately fine in N. Scotland and in parts of central and eastern England, cloudy and rainy in nearly all other places. Weather becoming fine and bright in S.E. later.

Temperature changing very little and readings uniform, between 50° and 60°. Maxima below 60° in the Shetlands, Hebrides, and Scilly Isles, between 60° and 65° generally, but 67° at Nottingham and 68° at Prawle Point.

Wind continuing northerly on nearly all our coasts, but south-easterly and easterly in the S.E., strong to a gale in force except in the S.E. of England. Little change during day, but force of wind decreasing.

Sea rough in the N.E. and rough to high in the S.W.

Barometer risen briskly over these Islands, and slightly over Norway and Denmark, falling over France. Depression recently noticed moving south-eastward and shown over the Channel again. Barometer rising all day and disturbance moving southward.

Friday, September 17.

Weather fine over the E. of Great Britain and in parts of Ireland, cloudy or dull in most other places with showers of rain at several stations. Showers falling in the W. all day, but very fine weather prevailing in the E.

Temperature risen over France and the S.E. of England, fallen elsewhere; readings uniform, ranging from 51° in the Shetlands to 60° at Nottingham. Maxima between 55° and 60° generally, but 63° in London.

Wind south-westerly in Ireland and Scotland, north-westerly over England and France, and northerly over the North Sea. Blowing freshly in the W. of Ireland and over the Bay of Biscay, moderate generally. South-westerly and westerly breezes all day.

Sea rough off Valentia and Stornoway.

Barometer fallen over Ireland and Scotland, risen over England and France. Depression recently noticed shown over Denmark with fresh disturbance near the Hebrides. Readings highest over Bay of Biscay. Pressure giving way briskly all day.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, September 18.

Weather fine in Scotland and the E. of Ireland, very unsettled and rainy elsewhere. Very fine afternoon and evening in the E. and N., but showery in the W.

Temperature lower in most places; readings still uniform, ranging from 50° in the Hebrides to 60° at Jersey. Maxima between 60° and 65° in the S.E., between 55° and 60° elsewhere.

Wind westerly over Ireland and W. England, southerly and south-westerly over France and our E. and N. coasts. Light in force in Scotland, strong to a gale elsewhere. Gale holding in the Channel all day but wind veering.

Sea rough in the S.W. and S.

Barometer falling briskly in nearly all places. Pressure highest in S. France with large depression to the northward of Scotland and secondary disturbance over the Bristol Channel. Recovery in W. later and disturbances travelling eastward.

Sunday, September 19.

Weather cloudy and rainy at most of the Continental stations, and on our W. and S.W. coasts, fine in most other places. Heavy rain in the S.E. of England during the morning, but fine generally after noon.

Temperature fallen in most districts—quickly in the S.E.—and low generally; readings ranging from 44° at Nairn to 59° at Scilly. Thermometer reaching 63° in London. Maxima below 60° elsewhere.

Wind north-westerly in the W. of Ireland, westerly to south-westerly over Great Britain and France, and southerly to the eastward of the North Sea. Blowing strongly in the W. and S. Westerly breezes prevailing all day.

Sea rough in the S.W. and W.

Barometer falling in nearly all places. Area of high readings reported from the south of France, with large depression to the northward of Scotland, and secondary disturbance near Scilly. Both disturbances travelling eastward, and pressure increasing.

Monday, September 20.

Weather again fine over Great Britain, and cloudy and unsettled elsewhere. Clouds and showers prevailing all day in the W. with fine weather in the east.

Temperature fallen over the Continent, risen slightly over these islands. Readings ranging from 44° at Nairn to 58° at Scilly. Maxima between 55° and 60° generally and between 60° and 64° at our central and southern stations.

Wind north-westerly on our own and the French coasts, and over the North Sea, southerly in Sweden. Moderate to fresh in force. Wind backing towards W. during day, and reaching S.W. at Valentia.

Sea rough at Mullaghmore and Spurn Head as well as on the French side of the Channel.

Barometer risen over the British Isles and France, fallen to the eastward of the North Sea; large depression lying over Norway and Denmark with an area of high pressure over the Bay of Biscay. Pressure giving way in the W. later.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟩⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	58	43	51·7	−0·4	3	0·51	+0·01	*	*
	Stornoway	59	38	51·1	−1·1	4	0·39	−0·71	40	45
	Wick	60	35	50·4	−2·8	4	0·26	−0·43	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	63	53	57·5	−1·4	6	1·08	−0·02	*	*
	Jersey (Noirmont)	64	50	57·4	−2·3	7	1·76	+1·05	27	31

The above observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	63	41	52·0	−1·2	5	0·23	−0·49	*	*
	Aberdeen	65	37	52·5	−1·7	6	1·03	+0·21	34	39
	Glenalmond	62	36	48·7	−5·3	5	0·83	?		
	Leith	64	41	53·5	−0·5	4	1·42	+0·80	*	*
2. ENGLAND N.E.	Shields	62	? 40	53·0	−2·2	7	1·36	+0·71	*	*
	Durham	65	40	52·8	−3·2	6	2·46	+1·86	27	31
	York	66	42	53·8	−2·6	6	2·00	+1·29	30	34
	Spurn Head	65	47	55·9	−0·9	5	1·91	?	*	*
	Kelstern (Lincolnsh.) ℳ	65	42	53·3	−3·9	5	3·11	+2·51	33	38
3. ENGLAND, E.	Hillington ℳ	67	42	54·1	−4·4	7	2·12	+1·65	24	28
	Yarmouth	63	43	54·2	−4·3	6	2·17	+1·45	*	*
	Geldeston	65	43	54·5	−4·0	5	2·05	+1·51	36	41
	Cambridge	67	42	54·2	−4·2	6	1·42	+0·87	40	46
	Rothamsted	66	44	54·6	−4·1	7	3·44	+2·74	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	67	44	55·2	−1·0	6	2·28	+1·68	*	*
	Nottingham	67	42	55·1	−2·3	7	2·05	+1·33	*	*
	Loughborough	69	46	56·3	−1·2	5	2·34	+1·61	*	*
	Leicester	65	44	55·3	−2·4	7	3·00	+2·35	30	34
	Birmingham (Oscott)	65	43	54·7	−2·8	7	2·45	+1·65	*	*
	Shrewsbury ℳ	62	42	53·3	−4·0	7	0·90	+0·25	*	*
	Churchstoke ℳ	60	43	52·7	−5·3	7	1·30	?	29	33
	Hereford ℳ	65	42	55·1	−2·9	6	1·30	+0·51	*	*
	Cirencester	64	40	54·2	−4·1	6	2·10	+1·23	32	37
	Oxford	63	45	55·9	−2·4	6	1·12	+0·42	31	36
5. ENGLAND, S.	London†	65	41	56·3	−2·7	7	2·17	+1·56	26	30
	Marlborough ℳ	64	40	55·1	−3·4	6	1·62	+0·70	*	*
	Strathfield Turgiss ℳ	67	41	55·2	−3·8	7	2·04	+1·34	*	*
	Dover	64	47	56·9	−2·5	6	1·70	+1·00	*	*
	Hastings (St. Leonard's)	68	43	56·1	−3·1	6	2·08	+1·39	*	*
	Southampton	67	43	56·8	−2·5	7	3·22	?	36	41
	Hurst Castle	65	47	58·4	−0·6	7	2·47	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	64	39	52·1	−1·4	7	1·46	?	*	*
	Glasgow	63	40	51·1	−2·9	6	1·49	+0·39	20	23
	Ardrossan	62	42	53·4	−1·2	6	1·71	+0·66	*	*
	Silloth (Cumberland)	64	40	53·7	−1·5	6	1·55	+0·63	35	40
	Douglas (Isle of Man)	64	45	53·1	−2·9	6	3·02	+2·22	43	49
7. ENGLAND, N.W.	Barrow-in-Furness	68	46	55·5	−1·0	6	1·28	?	*	*
	Stonyhurst	62	43	52·3	−4·1	6	1·71	+0·36	29	33
	Blackpool ℳ	63	48	54·9	−1·6	6	1·41	+0·46	*	*
	Manchester	62	43	53·4	−3·1	6	2·41	+1·39	*	*
	Liverpool Obsy (Bidston)	62	47	54·6	−2·4	6	1·13	+0·08	*	*
	Llandudno ℳ	63	47	55·9	−1·4	6	0·85	?	18	21
	Holyhead	61	? 49	55·4	−1·4	6	0·98	+0·13	*	*
8. ENGLAND, S.W	Pembroke	61	51	55·7	−1·8	5	1·27	+0·30	34	39
	Barnstaple	65	51	58·3	−0·2	6	2·81	+0·73	*	*
	Falmouth	62	51	56·4	−2·6	6	1·47	+0·73	24	28
	Plymouth	64	43	56·9	−2·0	7	1·28	+0·21	*	*
	Prawle Point	68	47	57·1	−1·9	6	0·73	?	*	*
9. IRELAND, N.	Londonderry	62	43	52·6	−1·7	6	0·84	−0·06	*	*
	Mullaghmore	62	46	54·4	−0·6	7	1·36	?	*	*
	Markree Castle	62	39	52·5	−2·5	5	0·86	+0·06	31	36
	Brookeborough	62	41	49·6	−5·4	5	1·50	?	*	*
	Armagh	63	43	51·9	−3·4	6	1·36	+0·61	32	37
	Donaghadee	64	41	52·7	−2·4	6	1·36	?	*	*
10. IRELAND, S	Dublin	64	45	54·4	−1·9	6	0·84	+0·28	38	44
	Parsonstown	64	43	53·1	−2·3	5	0·82	−0·05	37	43
	Waterford	66	39	54·1	−2·5	4	0·79	?	*	*
	Roche's Point	? 63	? 49	?56·0	?−0·6	?	?	?	*	*
	Valentia	62	48	56·2	+0·1	6	1·46	+0·23	29	33
	Foynes	64	43	53·2	−2·6	4	0·92	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 39.] WEEK ENDING MONDAY, SEPTEMBER 27, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Geldeston, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Waterford, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	69	39	55	3 above.	4	3	3 less.	27	33
	2. ENGLAND, N.E.	70	41	57	2 above.	3	3	3 less.	21	26
	3. ENGLAND, E.	75	44	59	1 above.	2	1	5 less.	13	16
	4. MID. COUNTIES	72	45	59	2 above.	2	1	7 less.	9	11
	5. ENGLAND, S.	75	47	61	3 above.	2	1	7 less.	22	26
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	66	45	56	3 above.	5	8	3 less.	12	14
	7. ENGLAND, N.W.	69	45	57	2 above.	4	5	6 less.	14	17
	8. ENGLAND, S.W.	68	45	59	1 above.	3	1	9 less.	14	17
	9. IRELAND, N.	68	43	58	4 above.	5	7	2 less.	12	15
	10. IRELAND, S.	69	49	59	4 above.	3	3	6 less.	12	15

General Remarks.

Weather during this period has been dry in all parts of the Kingdom; the sky, however, was very cloudy or overcast, and on some days fog or haze prevailed.

Temperature was a little above the mean for the season in all districts. The highest of the maxima occurred in most places on the 27th, when the thermometer in London rose to 75°. The minima were not very striking, the lowest reading of all being 39°, which was registered at Glenalmond both on the 21st and 22nd.

Rainfall was considerably less than the mean in all districts, the greatest deficit being over the central and southern parts of England.

Bright sunshine was everywhere very deficient, the percentage of possible duration ranging from 11 in the "Midland Counties" to 33 in "Scotland, E.," and 26 in "England, N.E."

Wind was westerly on the 21st and 22nd in all parts of the country, but by the 23rd it had backed to the south-westward, and continued to blow very generally from that quarter during the remainder of the period, but on the 27th calms or variable easterly breezes were experienced at many of the English stations. The westerly and south-westerly currents were generally light or moderate in force, but on the 22nd the westerly wind blew strongly at several of our W. coast stations.

Q 3049. 100.—9/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending September 27, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, September 21.

Weather fine in some parts of Scotland, cloudy and rainy generally over western Europe, with fog on our S.W. coasts. Sky clearing in the S.E. later, but cloud and rain continuing elsewhere.

Temperature fallen in S. France and N. Scandinavia, risen slightly in most other places. Readings ranging from 50° in the N.E. to 60° in the S.W. Maxima below 60° in the N., between 60° and 65° in the S.

Wind westerly over nearly the whole country, blowing moderately in most places but freshly at a few western and southern stations. Moderate westerly winds holding all day.

Sea rough off the Shetlands and at Barrow.

Barometer rising on the eastern shores of the North Sea and the N.E. of France, falling elsewhere. Pressure highest over Spain, lowest to the northward of Scotland, with a second depression over the Bristol Channel. Pressure recovering during day and depressions moving eastward.

Wednesday, September 22.

Weather fine in N. Scotland, cloudy or dull in all other places, fog on our S.W. coasts, rain in Norway. Cloudy all day, and rain falling except in the S.W.

Temperature risen in the more southern parts of our area, changed very little in the northern. Readings ranging from 51° in N. Scotland to 61° at Liverpool. Maxima between 60° and 70° generally, but 71° in London.

Wind between S.W. and W. on our coasts, and southerly over Scandinavia, strong to a gale at some western ports, moderate in force elsewhere. Light north-westerly winds in Scotland later, and moderate westerly winds over England.

Sea rough at Valentia and Barrow.

Barometer rising in the N. of Scotland and in most parts of the Continent, falling elsewhere. Pressure still highest in the S. and lowest off the W. of Norway, with depressions passing across England. Mercury rising everywhere later.

Thursday, September 23.

Weather cloudy or dull, except in some parts of France; fog, mist, or drizzling rain, reported from different parts of the country. Sky cloudy all day, but clearing in the S.E. at night.

Temperature, changes slight and irregular. Readings ranging from 50° in the Hebrides to 62° at Dover. Maxima below 60° in the N., between 60° and 65° generally and between 65° and 70° in the S.E.

Wind southerly in Ireland, variable between S.W. and N.W. over England, and easterly over France. Light or moderate in force on all coasts. Light variable breezes prevailing all day.

Sea slight or smooth generally.

Barometer falling a little at the French stations and over the Baltic, rising elsewhere—briskly in Scotland. Pressure high and uniform over these Islands and France, with depression near Christiansund. Scarcely any change during day, but slight fall at Valentia.

Friday, September 24.

Weather moderately fine on the S.E. coast of England, dull or cloudy elsewhere, with rain in S. Ireland. Very little change during day; rain falling at most northern and western stations.

Temperature risen slightly in the N., fallen generally; readings ranging from 50° in the Hebrides, to 61° at Dover. Maxima between 60° and 65°, except in N. Scotland.

Wind moderate or light on nearly all coasts; from E. in the S., from S. and S.W. in the W. and N., and from N.W. on the eastern shores of the North Sea. The southerly breezes in the W. spreading a little later, but no other change.

Sea rough off the W. of Ireland.

Barometer fallen in nearly all places. An area of high pressure lying over the S. of England and N. of France, with low readings to the north-westward of Scotland and over the Baltic. Little alteration during the day.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, September 25.

Weather fine over the S.E. of England and over parts of France; cloudy or dull generally, with rain at most of the Scotch stations. Improving during day, and fine in several parts in the evening.

Temperature little changed, but risen in most places; readings ranging from 53° in the Shetlands to 60° in London. Maxima between 60° and 65° generally.

Wind easterly over France, southerly and south-westerly over these Islands, light or moderate in force. Southerly and south-westerly breezes blowing all day.

Sea rough off the Scilly Islands.

Barometer rising in Scandinavia, falling slightly in all other places. Pressure very uniform, though higher over the Channel, and lower to the north-westward of Scotland than elsewhere. Slight recovery taking place later.

Sunday, September 26.

Weather cloudy or dull and foggy in most places, but fine at several of our eastern and south-eastern stations, and dry everywhere. Fine in the S.E. all day, but rain setting in in the extreme W.

Temperature risen a few degrees, and readings ranging from 54° in the Shetlands to 63° at Cork. Maxima exceeding 65° in many places, and as high as 72° in London and at Nottingham.

Wind easterly over France, south-westerly and southerly over nearly the whole of the United Kingdom. Moderate or light in force generally, but blowing freshly in the N.W. South-westerly breezes holding all day.

Sea rough off Brest, Valentia, and Stornoway.

Barometer falling in the Hebrides and W. of Norway, increasing elsewhere. Pressure still high and uniform over France and England, and relatively low off the N.W. coast of Scotland. Pressure increasing all day.

Monday, September 27.

Weather cloudy or dull at our western and north-western stations, fine in the E. and S.E. Fog prevailing at our central stations, and much fog or mist reported from France. Heavy rain all day at Stornoway, but weather dry generally, and fine in the S.E.

Temperature risen on our W. and N. coasts, fallen somewhat in the S. Readings uniform, ranging from 51° at York to 62° in London. Maxima 75° in London, and between 65° and 70° in most districts.

Wind little changed; still easterly over France, and southerly to south-westerly over the British Isles. Very light variable airs in the E. Calms and variable airs in the E. all day, but the southerly wind in the W. increasing to a strong breeze.

Sea rough at Valentia and off the coast of Norway.

Barometer risen everywhere. Large anticyclone lying over these Islands, the North of France, and the North Sea. Barometer rising all day except in the N. of Scotland.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	62	46	52·9	+1·7	5	0·50	−0·01	*	*
	Stornoway	62	45	54·5	+3·3	6	1·77	+0·66	13	16
	Wick	65	41	53·5	+1·8	5	0·88	+0·19	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	63	53	58·1	+0·7	5	0·11	−0·99	*	*
	Jersey (Noirmont)	68	54	59·4	+0·5	4	0·10	−0·65	20	24

The above observations made in "Scotland N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	67	44	56·2	+4·3	3	0·48	−0·22	*	*
	Aberdeen	67	40	56·7	+3·7	3	0·23	−0·60	27	33
	Glenalmond	65	39	52·2	−0·7	4	0·20	?		
	Leith	69	46	56·1	+3·3	5	0·40	−0·21	*	*
2. ENGLAND N.E.	Shields	70	41	55·8	+1·8	2	0·39	−0·26	*	*
	Durham	68	41	55·3	+0·8	3	0·66	+0·05	19	23
	York	70	44	57·3	+2·3	3	0·17	−0·53		
	Spurn Head	63	49	58·3	+3·1	3	0·15	?	*	*
	Kelstern (Lincolnsh.) ℳ	69	44	57·7	+1·7	2	0·21	−0·42	23	28
3. ENGLAND, E.	Hillington ℳ	73	46	58·4	+1·2	2	0·12	−0·39	16	19
	Yarmouth	64	46	58·1	+0·8	2	0·16	−0·59	*	*
	Geldeston	68	44	58·6	+1·0	3	0·21	−0·33	9	11
	Cambridge	72	44	59·0	+2·0	2	0·08	−0·47	15	18
	Rothamsted	75	46	58·7	+1·7	2	0·06	−0·64	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	? 72	45	58·2	+3·1	3	0·15	−0·48	*	*
	Nottingham	72	45	59·3	+3·4	2	0·03	−0·68	*	*
	Loughborough	72	50	59·6	+3·7	2	0·04	−0·71	*	*
	Leicester	68	48	58·6	+2·3	3	0·12	−0·53	10	12
	Birmingham (Oscott)	68	46	57·4	+1·2	1	0·03	−0·77	*	*
	Shrewsbury ℳ	70	45	57·7	+1·6	2	0·13	−0·53	*	*
	Churchstoke ℳ	68	45	57·4	+1·2	0	—	?	11	13
	Hereford ℳ	70	49	59·6	+2·7	2	0·02	−0·79	*	*
	Cirencester	67	46	58·5	+1·4	1	0·01	−0·88	6	7
	Oxford	68	50	59·2	+2·2	4	0·10	−0·60	8	10
5. ENGLAND, S.	London†	75	47	60·9	+3·6	2	0·05	−0·60	24	29
	Marlborough ℳ	69	48	59·9	+2·8	2	0·03	−0·89	*	*
	Strathfield Turgiss ℳ	72	48	60·6	+3·2	1	0·03	−0·68	*	*
	Dover	66	50	60·4	+2·4	1	0·05	−0·65	*	*
	Hastings (St. Leonard's)	69	49	60·6	+2·6	2	0·11	−0·61	*	*
	Southampton	73	49	61·6	+4·0	2	0·05	?	19	23
	Hurst Castle	68	53	60·5	+2·8	1	0·03	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	65	48	56·1	+3·9	6	0·99	?	*	*
	Glasgow	63	45	55·4	+2·7	4	0·46	−0·66	7	8
	Ardrossan	62	49	56·2	+3·8	4	0·64	−0·41	*	*
	Silloth (Cumberland)	66	45	56·9	+3·0	5	0·99	+0·04	12	14
	Douglas (Isle of Man)	64	46	56·0	+1·0	4	0·69	−0·11	17	20
7. ENGLAND, N.W.	Barrow-in-Furness	65	51	57·8	+2·5	4	0·57	?	*	*
	Stonyhurst	65	45	55·7	+0·6	4	0·55	−0·85	12	14
	Blackpool ℳ	65	47	56·4	+1·2	5	0·59	−0·43	*	*
	Manchester	69	? 45	56·1	+0·9	4	0·13	−0·92	*	*
	Liverpool Obsy (Bidston)	65	51	57·9	+1·9	3	0·75	−0·34	*	*
	Llandudno ℳ	65	52	58·1	+2·4	4	0·62	?	16	19
	Holyhead	63	52	58·7	+3·2	3	0·31	−0·59	*	*
8. ENGLAND, S.W	Pembroke	63	51	57·8	+1·2	5	0·07	−0·95	17	20
	Barnstaple	67	53	60·9	+3·4	5	0·14	−0·98	*	*
	Falmouth	64	53	58·4	+0·6	3	0·13	−0·67	11	13
	Plymouth	68	45	59·3	+1·3	2	0·04	−1·02	*	*
	Prawle Point	68	51	58·4	+0·4	2	0·03	?	*	*
9. IRELAND, N.	Londonderry	68	47	57·6	+4·6	7	0·84	−0·10	*	*
	Mullaghmore	66	51	59·2	+5·3	4	0·84	?	*	*
	Markree Castle	67	46	57·2	+3·8	4	0·54	−0·28	13	16
	Brookeborough	66	49	56·0	+3·2	2	0·64	?	*	*
	Armagh	64	49	58·1	+4·1	4	0·57	−0·22	11	13
	Donaghadee	66	43	56·7	+2·7	6	0·49	?	*	*
10. IRELAND, S	Dublin	66	50	58·3	+3·2	3	0·56	−0·04	12	14
	Parsonstown	67	49	58·5	+4·3	4	0·19	−0·69	10	12
	Waterford	67	51	59·3	+4·1	1	0·10	?	*	*
	Roche's Point	67	53	60·6	+5·1	2	0·11	−1·07	*	*
	Valentia	65	51	59·5	+4·4	6	0·59	−0·72	15	18
	Foynes	69	52	58·7	+4·2	4	0·31	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 40.] WEEK ENDING MONDAY, OCTOBER 4, 1880. [*Price 2d.*

[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Geldeston, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Waterford, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	69	35	52	0 (average).	3	5	0 (average).	33	41
	2. ENGLAND, N.E.	72	33	51	2 below.	3	7	1 more.	36	44
	3. ENGLAND, E.	70	30	52	4 below.	2	9	2 more.	19	24
	4. MID. COUNTIES	73	30	52	3 below.	3	14	8 more.	18	22
	5. ENGLAND, S.	71	33	54	2 below.	2	7	0 (average).	27	34
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	66	29	51	2 below.	2	2	8 less.	33	41
	7. ENGLAND, N.W.	69	28	52	2 below.	3	5	7 less.	23	28
	8. ENGLAND, S.W.	69	36	56	1 below.	3	17	8 more.	28	34
	9. IRELAND, N.	69	27	51	1 below.	2	2	7 less.	27	33
	10. IRELAND, S.	68	31	54	0 (average).	2	13	7 less.	34	42

General Remarks.

Weather this week was dry, cloudy, and foggy during the first few days, but wet and unsettled in nearly all places during the latter part. In Scotland snow showers occurred on the 2nd. The rain at our south-western stations was exceptionally heavy, and at Falmouth on Monday the amount measured was 2·6 ins., of which one inch fell within an hour.

Temperature was about equal to the mean in "Scotland, E.," and "Ireland, S.," but below it in all other districts. During the first part of the week the thermometer was comparatively high, but on 2nd October it fell rapidly, and remained low till the close of the period. The highest of the maxima occurred on 28th September, when the thermometer rose to 72° at York and 73° at Loughborough. The lowest of the minima were registered either on October 3rd or 4th, when the thermometer fell to 27° at Markree Castle and 28° at Blackpool, and in many other places to between 30° and 33°. On the grass readings were of course much lower, and at Silloth 21° was recorded.

Rainfall was less than the mean in Ireland, "Scotland, W.," and "England, N.W.," equal to it in "England, S.," and "Scotland, E.," but more in all other districts.

Bright sunshine was much less prevalent over the greater part of England than in Scotland or Ireland, the percentage of possible duration varying from 44 in "England, N.E.," 42 in "Ireland, S.," and 41 in Scotland, to 22 in the Midland Counties.

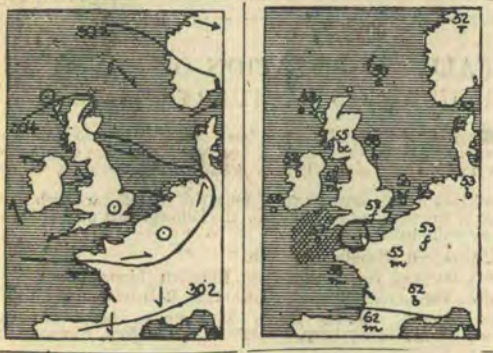
Wind at first was very light and variable in all parts of the country. On the 2nd and 3rd October, however, a moderate north-westerly current prevailed in the S., and a strong north-north-westerly wind at the more northern stations. At the close of the period the wind had shifted to the eastward (except on our E. coast), and, though light or moderate in most places, blew with the force of a gale at many of our Channel stations.

Q 3129. 100.—10/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending October 4, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.



Weather during the 24 hours succeeding the date of the Charts.

Tuesday, September 28.

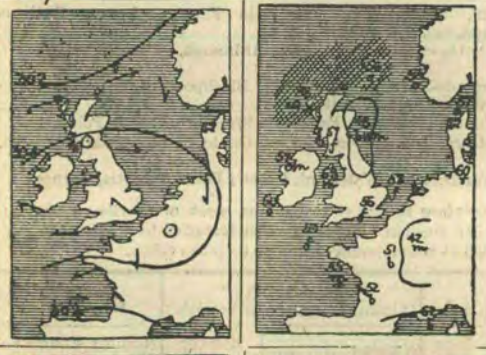
Weather overcast, and foggy or misty over the southern counties of England and Ireland, but fine and bright in most other places. Little change during day. No rain falling.

Temperature fallen slightly in most places; readings very uniform between 50° and 60°. Maxima between 60° and 65° in most places, but 72° at York and 69° at Nottingham.

Wind moderate from the eastward over France and the Channel, very light and variable elsewhere. Southerly wind springing up on our extreme western coasts later, little other change.

Sea rough round Scilly.

Barometer falling over Scandinavia, rising in all other places. Large area of very uniform pressure lying over the British Isles and N. France, with relatively low readings over Lapland and over the Gulf of Lyons. Barometer falling a little in the Hebrides later.



Wednesday, September 29.

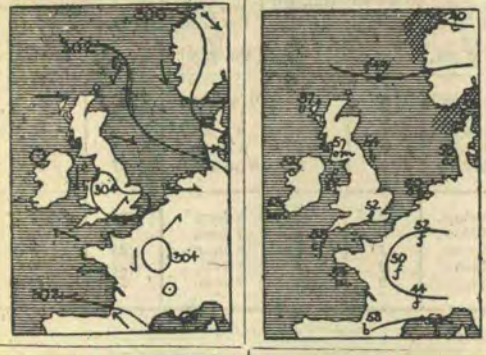
Weather fine over France, but cloudy or dull over the whole of the United Kingdom, with a great deal of fog and haze. Weather becoming fine and bright in the S. and E. later, but cloudy with some rain in the N.

Temperature risen in the extreme N., fallen generally; readings ranging from 48° at Aberdeen and Shields, to 60° at Valentia. Maxima again between 60° and 65° in most places.

Wind still easterly in France and variable over the greater part of England, but southerly in Ireland and westerly over Scotland. Light in force except in the Hebrides and Shetlands. No change during day.

Sea rough to the northward of Scotland.

Barometer fallen a little in the N. and W., risen elsewhere. Anticyclone lying over Ireland, England, and the N. of France. Fall of barometer spreading to all places during day and becoming brisk in Norway.



Thursday, September 30.

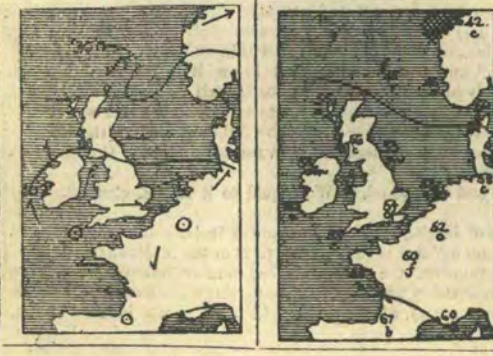
Weather cloudy or dull, except in the N. and W. of France, and at some of our north-eastern stations; much fog and haze still reported in the South. Rain falling at Wick. Weather fine in the S. and E. all day. Some rain falling in the N.

Temperature risen in the N.E., fallen or changed irregularly elsewhere; readings ranging from 49° at Sumburgh Head to 59° at Prawle Point. Maxima below 50° in the N., between 60° and 65° generally.

Wind still easterly over France and the Channel, south-easterly over Ireland, westerly on our northern coasts, and north-westerly over Scandinavia. To the eastward of the North Sea wind strong to a gale, with light variable airs over England.

Sea rough to high on the W. coast of Norway.

Barometer fallen slowly over the whole of western Europe, and quickly over Scandinavia, where a deep depression is shown. Anticyclone still lying over these Islands and France. Pressure giving way all day at our stations, but recovery setting in in Norway.



Friday, October 1.

Weather fine over France and some south-western stations, cloudy, dull, and foggy generally, rain falling in Shetlands. Fine in the S.E. all day, dull elsewhere, with rain in the extreme N.

Temperature fallen in Scandinavia and Scotland, changed little in most other places. Readings ranging from 45° in the Shetlands to 60° at Valentia. Maxima below 60° in the N., between 60° and 65° elsewhere.

Wind moderate from E. over France, light from W. over these Islands, and strong from S.W. and N.W. over Scandinavia. North-easterly breezes reported from the Shetlands, and northerly winds spreading to N. Scotland later.

Sea high at Christiansund.

Barometer falling over the whole of western Europe. Readings still high and uniform over Ireland, England, and France, with low pressure in N. Scandinavia. Disturbance forming over the S. of Norway later, and barometer falling everywhere.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, October 2.

Weather fine over Scotland, France, and the S.E. of England, cloudy or dull elsewhere, with fog over the Netherlands, and rain in the N.E. of England. Cold showers of rain falling in nearly all parts of the country later.

Temperature fallen very fast in Scotland and slightly in Norway and Sweden, risen a little in the S. Fall of temperature spreading quickly southward during day, and maxima below 50° in the N., and between 55° and 60° in most other districts.

Wind westerly over the S. of Ireland and England, but northerly in the more northern parts of the Kingdom, blowing freshly in the N.W., moderate elsewhere. Northerly wind blowing strongly, and extending to most coasts later.

Sea rough round the Hebrides and at the mouth of the Wash.

Barometer fallen everywhere—quickly in the S.E. and to the eastward of the North Sea. Area of high pressure over France and our W. coasts, with depression over the Skager Rack. Barometer falling except in the W. later.

Sunday, October 3.

Weather fine over the greater part of England, Ireland, and the N. of France, cloudy elsewhere, with rain in Scotland and N. Germany. Sky moderately clear all day in most districts.

Temperature risen in extreme N., fallen generally—very quickly in the S. of England. Readings ranging from 39° at Shields to 51° at Prawle Point. Maxima between 50° and 55°.

Wind variable over France but northerly and north-westerly on our coasts and over the North Sea; blowing freshly or strongly at most of our northern and eastern stations. Northerly breezes prevailing all day but force decreasing.

Sea high off the Hebrides and at the mouth of the Humber, rough at Wick and Holyhead.

Barometer falling in all places except the Shetlands and S. of Norway. Readings highest over Ireland, lowest over the Skager Rack. Slight rise occurring in the N. during the day; no other change.

Monday, October 4.

Weather fine on our north-western, north-eastern, and northern coasts, cloudy or dull elsewhere, with heavy rain on our S.W. coasts and over the Channel. Fog or mist prevailing in several places. Rain extending all over the S. of England later.

Temperature risen a little in the N.E. of England, fallen or changed irregularly elsewhere. Readings ranging from 32° at Parsonstown to 49° at Scilly. Maxima about 60° in the S.E., between 50° and 55° elsewhere.

Wind northerly over Scotland, but drawing into N.W. and W. on our E. coast and over the North Sea, easterly winds strong in force over the Channel and our western coasts. Easterly wind gradually spreading and rising to a gale at Scilly.

Sea rough in the S.W., N.E., and N.

Barometer risen a little on the eastern shores of the North Sea, fallen elsewhere—quickly in the S.W. Large depression shown over the Bay of Biscay. Disturbance moving north-eastwards later and barometer falling everywhere.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	57	35	46·2	−3·8	6	1·47	+0·92	*	*
	Stornoway	60	35	49·5	−0·5	5	1·27	+0·16	14	18
	Wick	65	33	49·1	−1·1	6	1·26	+0·56	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	64	45	55·4	−1·6	3	1·86	+0·75	*	*
	Jersey (Noirmont)	67	43	57·7	+0·1	3	1·96	+0·17	49	60

The above observations made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	64	38	51·3	+0·8	5	1·06	+0·41	*	*
	Aberdeen	67	37	51·5	+0·1	3	0·70	−0·01	34	43
	Glenalmond	65	35	50·1	−1·4	0	—	?	31	39
	Leith	69	36	53·0	+1·5	2	0·21	−0·35	*	*
2. ENGLAND N.E.	Shields	63	34	50·6	−2·2	4	0·44	−0·17	*	*
	Durham	67	35	50·7	−2·4	3	0·59	−0·08	41	51
	York	72	34	51·6	−2·1	2	0·59	−0·12		
	Spurn Head	66	33	52·7	−1·1	2	0·55	?	*	*
	Kelstern (Lincolnsh.) ℳ	69	33	50·4	−4·2	2	1·53	+0·84	30	37
3. ENGLAND, E.	Hillington ℳ	67	30	49·4	−5·6	2	0·82	+0·13	18	22
	Yarmouth	63	35	51·9	−4·0	3	0·73	−0·02	*	*
	Geldeston	70	33	50·6	−4·8	2	0·72	+0·18	16	20
	Cambridge	69	34	52·8	−2·7	2	1·24	+0·69	24	30
	Rothamsted	66	33	53·3	−2·0	3	0·86	+0·14	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	71	33	51·9	−2·0	3	1·44	+0·82	*	*
	Nottingham	69	30	52·9	−1·2	2	1·21	+0·51	*	*
	Loughborough	73	33	53·3	−0·8	3	1·61	+0·89	*	*
	Leicester	68	35	51·5	−3·5	2	1·56	+0·91	11	14
	Birmingham (Oscott)	67	35	50·6	−4·1	3	1·39	+0·59	*	*
	Shrewsbury ℳ	67	30	50·7	−4·3	4	1·49	+0·80	*	*
	Churchstoke ℳ	66	32	50·8	−4·2	3	1·15	?	24	30
	Hereford ℳ	67	33	51·7	−3·8	3	1·80	+1·10	*	*
	Cirencester	65	31	50·4	−5·4	2	1·40	+0·67	15	19
	Oxford	65	34	50·8	−4·9	2	1·13	+0·43	20	25
5. ENGLAND, S.	London†	65	33	54·2	−1·5	2	0·52	−0·14	22	27
	Marlborough ℳ	67	33	51·1	−4·6	2	1·37	+0·46	*	*
	Strathfield Turgiss ℳ	68	33	52·6	−3·4	3	0·39	−0·32	*	*
	Dover	65	39	56·2	−0·3	2	0·45	−0·27	*	*
	Hastings (St. Leonard's)	69	34	55·1	−1·6	2	0·80	+0·05	*	*
	Southampton	71	34	53·5	−2·8	2	0·48	?	32	40
	Hurst Castle	68	36	55·0	−1·4	2	0·79	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	62	34	50·1	−0·7	2	0·15	?	*	*
	Glasgow	63	32	50·7	−0·5	1	0·01	−1·07	32	40
	Ardrossan	64	33	51·6	−0·4	0	—	−1·04	*	*
	Silloth (Cumberland)	66	29	50·9	−1·9	1	0·05	−0·90	35	44
	Douglas (Isle of Man)	65	35	50·6	−3·1	4	0·63	−0·21	31	38
7. ENGLAND, N.W.	Barrow-in-Furness	65	35	53·0	−0·5	2	0·06	?	*	*
	Stonyhurst	69	33	51·5	−2·3	3	0·45	−0·97	26	32
	Blackpool ℳ	63	28	50·2	−3·5	2	0·30	−0·78	*	*
	Manchester	67	31	50·8	−3·1	2	0·09	−0·99	*	*
	Liverpool Obsy (Bidston)	63	38	53·0	−1·8	4	1·02	−0·08	*	*
	Llandudno ℳ	63	39	? 53·1	? −1·2	4	0·87	?	19	23
	Holyhead	63	? 43	54·4	+0·1	4	0·54	−0·46	*	*
8. ENGLAND, S.W	Pembroke	63	43	54·4	−0·7	2	0·89	−0·14	28	35
	Barnstaple	69	43	58·2	+2·0	2	1·89	+0·70	*	*
	Falmouth	62	44	55·2	−1·5	3	3·35	+2·53	27	33
	Plymouth	66	36	55·0	−2·2	3	1·18	+0·15	*	*
	Prawle Point	69	37	56·9	−0·1	3	1·06	?	*	*
9. IRELAND, N.	Londonderry	65	35	51·8	+0·1	3	0·18	−0·81	*	*
	Mullaghmore	64	43	52·9	+0·4	3	0·19	?	*	*
	Markree Castle	65	27	49·6	−2·4	3	0·16	−0·69	26	32
	Brookeborough	69	30	51·1	−1·2	1	0·07	?	*	*
	Armagh	64	34	51·0	−1·8	2	0·33	−0·45	27	33
	Donaghadee	62	40	51·2	−1·1	1	0·07	?	*	*
10. IRELAND, S	Dublin	63	36	51·8	−1·7	3	0·90	+0·26	29	36
	Parsonstown	67	31	52·6	−0·2	3	0·36	−0·49	31	38
	Waterford	68	32	52·7	−1·3	2	0·21	?	*	*
	Roche's Point	67	40	55·8	+1·7	2	0·10	−1·04	*	*
	Valentia	67	38	56·0	+2·1	2	0·04	−1·37	42	52
	Foynes	67	36	52·5	−0·8	2	0·12	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.
† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 41.] WEEK ENDING MONDAY, OCTOBER 11, 1880. [*Price 2d.*
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I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Geldeston, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Waterford, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	56	29	46	4 below.	4	7	2 more.	37	49
	2. ENGLAND, N.E.	58	34	49	3 below.	6	10	4 more.	14	18
	3. ENGLAND, E.	65	36	52	2 below.	6	17	11 more.	6	8
	4. MID. COUNTIES	63	35	49	5 below.	5	11	5 more.	5	7
	5. ENGLAND, S.	66	40	54	1 below.	6	21	17 more.	13	17
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	58	32	47	3 below.	1	4	5 less.	24	31
	7. ENGLAND, N.W.	59	35	49	4 below.	2	5	7 less.	13	17
	8. ENGLAND, S.W.	67	39	53	3 below.	4	8	2 less.	19	24
	9. IRELAND, N.	60	30	47	4 below.	1	1	8 less.	30	39
	10. IRELAND, S.	59	32	48	4 below.	3	9	0 (average).	23	31

General Remarks.

Weather has been cold but moderately fine at nearly all our western and north-western stations, very unsettled in all other places, with exceedingly heavy rains in the S. and E. of England. Thunder occurred at Pembroke on the 7th, and in several parts of England during the night of the 7th—8th.

Temperature was below the mean in all districts, the deficit ranging from 5° in the "Midland Counties" to 1° in "England, S." The highest reading recorded was 67°, which occurred at Barnstaple on the 11th. The lowest of the minima were registered over central Ireland and at Glenalmond, where the thermometer fell to 29° or 30°.

Rainfall was equal to the mean in "Ireland, S.," but less in all the other western and north-western districts; in the southern, central, and north-eastern parts of the Kingdom the fall exceeded the mean value, and in "England, E.," and "England, S.," the excess was very large.

Bright sunshine shows an increase in "Scotland, E.," and "Ireland, N.," but a decided decrease elsewhere. Over the "Midland Counties" and in "England, E.," scarcely any sunshine was experienced, the percentage of total possible duration ranging from 7 or 8 in those districts to 49 in "Scotland, E."

Wind during the first two days was south-westerly in the S.E. and north-easterly in all other places; but by the 7th the south-westerly wind had disappeared and the north-easterly current was blowing in all parts of the Kingdom, reaching the force of a gale in the S.W. and W., and continued to prevail during the remainder of the period.

ERRATUM.—The "Rainfall for the week" in "Ireland, S.," for week ending October 4th should be 3.

Q 3238. 100.—10/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending October 11, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, October 5.

Weather fine at a few of our northern and north-western stations, very dull, wet, and unsettled generally. Weather wet all day except in the extreme N.W and W.

Temperature risen in nearly all places, the change in the S.E. being very rapid, amounting to 19° in London. Readings ranging from 35° at Nairn to 62° at Hurst Castle. Maxima between 60° and 65° in the S.E., between 50° and 55° elsewhere.

Wind south-westerly over France and the Channel, easterly to north-easterly over most of our districts, and northerly at Scilly. Blowing a gale over the greater part of the north of France, England, and Ireland, but light in Scotland. Not much change during day.

Sea rough except off the Scotch coasts.

Barometer rising somewhat in Scandinavia, falling elsewhere, rapidly on our S.W. coasts. Deep depression lying over the S.W. of England. Disturbance travelling north-eastward, and slight recovery commencing in S.W.

Wednesday, October 6.

Weather fine in Scotland and the N. of Ireland, still dull and unsettled elsewhere, with rain in the S.E. and E. Dull and wet all day, except in Scotland.

Temperature fallen several degrees in the S. of England, risen elsewhere; readings ranging from 44° in the Hebrides to 61° at Dover. Maxima between 50° and 55° in nearly all parts of the Kingdom.

Wind northerly and north-easterly on all our more northern and western coasts, and southerly over France, the Netherlands, and S E. of England. Blowing freshly in the N. and W., lightly or moderately elsewhere. Little change later.

Sea rough, except in the W., S., and S.E. of England.

Barometer falling over France, N. Germany, and Denmark, rising elsewhere. Yesterday's disturbance shown off the mouth of the Humber, but new depression lying in the S.W. High readings reported from the N.W. of Scotland and S.E. of France. Depression in S.W. becoming much deeper during day.

Thursday, October 7.

Weather still fine in Scotland and the W. of Norway, cloudy or dull elsewhere, with rain in the S.W. Weather clearing in the S.E. later, but rain continuing in the S.W. most of the day.

Temperature fallen over France, risen at most of our stations; readings ranging from 41° in the Hebrides to 59° at Hurst Castle. Maxima between 60° and 65° in the S.E., between 50° and 55° elsewhere.

Wind moderate or fresh from N. and N.E. on our north-eastern and northern coasts, and light and variable in the S.E. of England, but south-westerly gales reported over Bay of Biscay, S.E. gales in S.W. England, and N.E. gales in S. Ireland. No change later.

Sea rough on several parts of our coasts, and high in the S.W.

Barometer fallen at Scilly, risen in all other places, and depression in S.W. consequently much deeper. Highest readings over Scotland. Pressure increasing everywhere later, and depression unaltered.

Friday, October 8.

Weather fine on our N.W. and N. coasts, cloudy elsewhere with rain at our south-eastern and north-eastern stations. Weather dull and unsettled all day except in the N.

Temperature fallen in most places; readings ranging from 38° at Nairn to 57° on our S.W. coasts. Maxima between 50° and 60°.

Wind south-westerly and southerly over France, easterly and north-easterly over these Islands; blowing a gale at the French stations and freshly on our S.W. coasts, but moderate generally. Moderate easterly to north-easterly breezes prevailing all day.

Sea rough on our S.W. coasts and high off Ushant.

Barometer risen in all places—quickly in the S.W.—depression apparently passing southward and shown off the N.W. of France. Barometer rising all day over these Islands, but falling in France and depression becoming deeper.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, October 9.

Weather fine at all our more northern and western stations as well as on the E. coast of England, but cloudy and wet in the S. and over France. Very wet and unsettled all day in the S., fine in W. and N.

Temperature fallen over Ireland, England, and France, changed little elsewhere. Readings ranging from 38° in the Hebrides to 56° at Dover. Maxima between 50° and 56° generally.

Wind north-easterly on our coasts, northerly in Brittany, north-westerly to westerly over the Bay of Biscay, and southerly over the Netherlands. Moderate in most places, but blowing freshly in the S.W. and reaching the force of a gale over the Bay of Biscay. Fresh gale blowing in the E. at night.

Sea high in the Bay of Biscay, rough at Scilly and Valentia.

Barometer fallen briskly at Jersey and slightly at the south-eastern stations, risen elsewhere. Depression shown over Channel Islands. A large area of high pressure lying to the northward of Scotland. Pressure increasing except in England S.E. Disturbance travelling slowly eastward.

Sunday, October 10.

Weather fine in Ireland and the N. and W. of Scotland, dull in nearly all other places, with rain over the Channel and its neighbourhood. Little change during day, sky still clear N. and W.

Temperature risen over England, fallen elsewhere. Readings ranging from 36° at Stornoway to 55° on our S. coast. Maxima again between 50° and 55° generally.

Wind easterly and north-easterly on nearly all our coasts, north-westerly and westerly over the Bay of Biscay, and southerly in the Netherlands—blowing a gale on our S.W. coasts and freshly or strongly except in Scotland. Wind veering a little later; no other change.

Sea rather rough except in the N.

Barometer rising at all places except Jersey. Disturbance shown over Channel Islands having moved westward again. Readings still high in N.W. Scotland. Disturbance still moving westward at 6 P.M., and barometer rising.

Monday, October 11.

Weather fine over the greater part of Western Europe, but dull on our S.W., S., and E. coasts. Showers of rain falling in the E. and S.E. in evening, but weather fair generally during most of the day.

Temperature risen on our S.W. coasts, fallen elsewhere—rather briskly at some stations. Readings ranging from 36° at Nairn to 56° at Scilly. Maxima below 55° in the N. and E., between 55° and 58° in the S.W.

Wind easterly over France, England, and Ireland, blowing freshly in the Channel; light from W. in N. Scotland, with gales or fresh breezes from the same quarter in Scandinavia. No change during day.

Sea high off the W. of Norway, rough at Spurn Head and Scilly.

Barometer falling in N. Scandinavia, and large depression shown in that neighbourhood, rising in all other places, with anticyclone over Scotland and the North Sea. Slight fall commencing in the S.E. later; no other change.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the heig the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	53	36	45·7	−2·8	4	0·19	−0·40	*	*
	Stornoway	54	29	43·6	−5·0	3	0·77	−0·35	38	51
	Wick	56	30	43·0	−5·8	2	0·13	−0·57	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	59	46	53·5	−2·5	4	0·97	−0·15	*	*
	Jersey (Noirmont)	66	45	57·0	−0·8	7	3·93	+3·13	26	33

The above observations made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	53	34	43·8	−5·0	4	0·54	−0·06	*	*
	Aberdeen	55	33	46·8	−2·8	4	1·03	+0·24	31	41
	Glenalmond	56	29	45·4	−4·2	2	0·03	?	43	57
	Leith	55	33	47·4	−2·4	6	1·04	+0·53	*	*
2. ENGLAND, N.E.	Shields	55	41	49·3	−1·9	6	0·81	+0·21	*	*
	Durham	55	39	47·4	−4·2	5	1·73	+1·04	9	12
	York	58	34	48·2	−3·9	4	0·42	−0·28	?	?
	Spurn Head	57	43	51·9	−0·1	7	0·67	?	*	*
	Kelstern (Lincolnsh.) ⁂	56	40	48·6	−4·4	7	1·40	+0·67	18	23
3. ENGLAND, E.	Hillington ⁂	65	40	51·1	−2·2	5	1·24	+0·72	5	6
	Yarmouth	63	43	52·8	−1·0	6	1·23	+0·52	*	*
	Geldeston	64	42	52·7	−1·2	7	1·51	+0·97	8	10
	Cambridge	64	36	50·5	−3·2	5	2·11	+1·58	6	8
	Rothamsted	62	42	50·7	−2·8	7	2·30	+1·60	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	50	36	48·9	−3·3	5	1·16	+0·51	*	*
	Nottingham	56	35	47·9	−4·8	5	1·25	+0·55	*	*
	Loughborough	56	39	48·9	−3·3	4	1·17	+0·47	*	*
	Leicester	55	42	49·3	−3·9	5	1·65	+1·03	3	4
	Birmingham (Oscott)	56	41	48·3	−4·7	4	0·99	+0·20	*	*
	Shrewsbury ⁂	56	35	47·3	−6·1	3	0·58	−0·12	*	*
	Churchstoke ⁂	53	38	46·2	−7·4	3	0·70	?	6	8
	Hereford ⁂	56	38	49·1	−5·1	4	0·79	0·00	*	*
	Cirencester	58	38	49·1	−5·1	6	1·37	+0·56	6	8
	Oxford	63	38	51·0	−3·3	7	1·75	+1·06	6	8
5. ENGLAND, S.	London†	65	41	53·4	−0·6	7	3·72	+3·07	10	13
	Marlborough ⁂	63	41	50·8	−3·3	6	1·72	+0·82	*	*
	Strathfield Turgiss ⁂	65	40	52 2	−2·2	6	1·67	+0·98	*	*
	Dover	64	46	56·0	+0·9	6	2·50	+1·58	*	*
	Hastings (St. Leonard's)	66	47	56·7	+1·6	7	2·72	+2·00	*	*
	Southampton	66	44	53·6	−1·3	5	0·94	?	16	21
	Hurst Castle	63	46	54·2	−0·8	5	1·61	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	58	34	45·9	−3·1	0	—	?	*	*
	Glasgow	53	32	46·0	−3·6	0	—	−1·02	25	33
	Ardrossan	58	35	46·8	−3·4	0	—	−1·04	*	*
	Silloth (Cumberland)	57	34	46·9	−4·2	2	0·25	−0·70	22	29
	Douglas (Isle of Man)	57	45	50·0	−2·0	2	1·65	+0·75	25	32
7. ENGLAND, N.W.	Barrow-in-Furness	59	38	49·0	−3·0	2	0·24	?	*	*
	Stonyhurst	54	41	48·4	−3·9	2	0·15	−1·27	17	22
	Blackpool ⁂	56	35	48·5	−3·8	3	0·35	−0·76	*	*
	Manchester	54	39	47·8	−4·5	1	0·29	−0·79	*	*
	Liverpool Obsy (Bidston)	54	40	48·2	−5·0	3	0·53	−0·57	*	*
	Llandudno ⁂	54	44	49·8	−3·2	3	0·65	?	9	12
	Holyhead	54	45	50·1	−3·0	3	1·10	0·00	*	*
8. ENGLAND, S.W.	Pembroke	58	39	49·9	−4·0	3	0·52	−0·53	24	31
	Barnstaple	67	42	54·4	−0·7	4	0·84	−0·38	*	*
	Falmouth	59	47	53·0	−2·7	6	1·31	+0·41	13	17
	Plymouth	62	43	53·3	−2·8	4	0·67	−0·43	*	*
	Prawle Point	60	45	52·9	−3·0	5	0·80	?	*	*
9. IRELAND, N.	Londonderry	54	32	45·5	−4·7	1	0·02	−1·03	*	*
	Mullaghmore	56	40	49·0	−2·1	0	—	?	*	*
	Markree Castle	58	30	45·9	−4·9	0	0·01‡	−0·86	32	42
	Brookeborough	62	30	45·3	−5·6	0	—	?	*	*
	Armagh	52	34	46·0	−5·1	1	0·19	−0·61	27	35
	Donaghadee	56	46	50·9	0·0	2	0·49	?	*	*
10. IRELAND, S.	Dublin	55	44	49·7	−2·8	4	2·46	+1·77	22	29
	Parsonstown	58	32	44·8	−7·0	3	0·52	−0·33	? 19	? 25
	Waterford	58	41	49·3	−3·5	3	0·94	?	*	*
	Roche's Point	58	41	49·5	−3·4	2	0·64	−0·46	*	*
	Valentia	59	41	49·4	−3·4	4	0·43	−1·07	29	39
	Foynes	55	39	47·0	−5·0	1	0·09	?	*	*

Stations marked ⁂ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory. ‡ Dew.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 42.] WEEK ENDING MONDAY, OCTOBER 18, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Geldeston, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Waterford, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	59	30	48	1 above.	2	3	2 less.	10	14
	2. ENGLAND, N.E.	61	36	49	2 below.	2	2	4 less.	12	16
	3. ENGLAND, E.	59	32	49	3 below.	2	1	5 less.	17	23
	4. MID. COUNTIES	62	31	47	5 below.	2	1	6 less.	21	29
	5. ENGLAND, S.	59	34	50	3 below.	2	2	5 less.	16	22
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	59	30	48	1 below.	3	3	7 less.	10	14
	7. ENGLAND, N.W.	59	36	49	2 below.	2	2	10 less.	12	16
	8. ENGLAND, S.W.	63	39	51	3 below.	0	—	11 less.	33	45
	9. IRELAND, N.	59	29	48	1 below.	2	2	6 less.	5	6
	10. IRELAND, S.	60	31	49	2 below.	1	less than ½	10 less.	29	40

General Remarks.

Weather has been very fine and dry in the south-western parts of the Kingdom, and dry, though not nearly so bright, in all other parts of the country. Rather thick fog prevailed at times in the S.E. of England and over the S. of Scotland.

Temperature was slightly above the mean in "Scotland, E.," but below it in all other districts; in the "Midland Counties" the deficit was as much as 5°. The lowest reading recorded occurred at Markree Castle on the 12th, when the thermometer fell to 29°, but in most other places the lowest readings were registered on the 15th, and slight frost was experienced over the central and eastern parts of England.

Rainfall was much less than the mean in all districts, and in "England, S.W.," there was no rain at all.

Bright sunshine was more prevalent at the south-western stations and over central and eastern England than it was during last week, but elsewhere the number of hours recorded shows a decrease. The percentage of total possible duration was greatest (45) in "England, S.W.," and least (6) in "Ireland, N."

Wind during the first two days was light from the north-eastward over England and Ireland and from the westward in Scotland, but by the 14th it had shifted to the north-north-westward on nearly all our coasts but still blew from the north-eastward or eastward in the S.W. On the 15th, 16th, and 17th very light and variable airs were experienced in all places, and to the close of the period a moderate or fresh westerly breeze prevailed in all parts of the country.

Q 3294. 100.—10/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending October 18, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, October 12.

Weather dull over Scotland and the E. of England, but fine or moderately so elsewhere. Rain falling over the Straits of Dover; fine in the W. all day, and clearing in the S.E. in the evening.

Temperature risen Scotland and Norway, fallen generally. Readings ranging from 36° at Parsonstown to 52° at Scilly. Maxima between 50° and 55° generally.

Wind westerly in the extreme N. of Scotland and over Scandinavia, north-easterly to easterly elsewhere—blowing freshly in a few places, but moderately generally. North-easterly breezes holding all day.

Sea rough on our S.E. coasts.

Barometer risen somewhat on our N.W. coasts, fallen generally. Anticyclone over the northern parts of the Kingdom, with low pressures over Lapland and in S.E. France. Pressure decreasing everywhere during day.

Wednesday, October 13.

Weather dull except to the eastward of the North Sea and over the greater part of the S. of England and N. of France. Rain falling in the Netherlands and much fog in S. Scotland. Cloudy all day but hardly any rain falling.

Temperature risen over these Islands, fallen at most continental stations, ranging from 36° at Parsonstown to 53° at Yarmouth. Maxima between 50° and 55° in the S. and 55° and 58° elsewhere.

Wind northerly on most of our coasts, but easterly and north-easterly over Ireland, the Channel, and France. Westerly winds, strong to a gale, reported from Scandinavia; westerly and north-westerly breezes prevailing in the N. later.

Sea slight except at Christiansund.

Barometer risen over France and S. England, fallen elsewhere—quickly in Norway and Sweden. Anticyclone lying over Ireland, Scotland, and the N. of England, with depressions over the N. of Scandinavia. Slight rise taking place during day.

Thursday, October 14.

Weather fine over eastern and central England, as well as over the W. and S. of France, dull generally, with showers at Aberdeen. Fine all day in the S.E., but slight rain falling in N. Scotland.

Temperature risen on our own and the French western coasts, fallen elsewhere. Readings ranging from 41° at York to 53° at Scilly. Maxima between 55° and 58° generally.

Wind very light on our coasts,—generally from the northward,—moderate to fresh from E. over the Channel and France, and moderate to strong from N.W. over Scandinavia. Very light northerly breezes holding all day.

Sea slight, except at Christiansund.

Barometer risen over the whole of western Europe. Large anticyclone lying over the British Isles and France, with comparatively low pressures over the Gulf of Lyons, and a large depression over Lapland. Slight decrease occurring during day.

Friday, October 15.

Weather fine on our S.E. coast, dull in nearly all other places, with a good deal of fog or haze. Rain falling in W. Norway. Foggy and dull all day, but no rain falling except in the extreme N. of Scotland.

Temperature risen on our S.W. coasts and over Norway and Denmark, fallen elsewhere—briskly in south-eastern England; ranging from 36° at Cambridge to 55° at Scilly. Maxima uniform between 50° and 55°.

Wind light and variable over the greater part of these Islands, with moderate to strong breezes from E. over France and our S.W. coasts, and from N.W. in the Shetlands and to the eastward of the North Sea. No change later.

Sea rough in the N. and high in the Skager Rack.

Barometer falling everywhere. Readings very uniform over these Islands and northern and central France, with low pressures over Spain and the N. of Scandinavia. Gradual and uniform decrease continuing all day.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, October 16.

Weather fine on the S.E. coast of England, cloudy or dull in nearly all other places, with mist or fog at many stations. Snow falling at Christiansund. Dull and cloudy, but dry weather continuing all day.

Temperature risen somewhat over France and quickly over the S.E. of England, fallen elsewhere—readings ranging from 35° at Parsonstown to 54° at Dover. Maxima between 50° and 55° generally, but rather higher in the S.W.

Wind light or moderate on nearly all coasts, from N.W. and W. over Scandinavia and our more northern districts, and from S.E. and E. over France and our more southern districts. No change later.

Sea rough near the Shetlands and the Scaw.

Barometer rising in Norway and Sweden and the S. of France, falling elsewhere. Pressure still uniform over these Islands with low readings over the Bay of Biscay and the Baltic. Very slight decrease during day.

Sunday, October 17.

Weather cloudy or dull generally, but fine on some parts of our E. and S.W. coasts and in the N.W. of France. Much fog still prevailing. Cloudy but dry all day.

Temperature changes slight, downward in the E., upward in the W. Readings ranging from 42° at Parsonstown to 53° at Scilly. Maxima between 50° and 58°.

Wind moderate to fresh from W. over Scotland, the North Sea, and Scandinavia, light and variable on our coasts and light from E. over France. Westerly breezes on most coasts in the evening, blowing freshly in N.

Sea slight except at Sumburgh Head.

Barometer falling in Scotland and over the countries to the eastward of the North Sea, rising elsewhere. Pressure still high and uniform over Ireland, England, and France, with moderate gradients in N. Scotland.

Monday, October 18.

Weather fine over the greater part of these Islands and the N. of France, but dull at most Continental stations, and dull and wet in N. Scotland. Very fine in the S. all day, but showery in Scotland.

Temperature risen on our N.W. coasts, fallen in most other places—quickly in N. Scotland. Readings ranging from 37° at Stornoway to 52° at Scilly. Brisk fall of temperature occurring in Scotland later and spreading slowly southward.

Wind northerly in N. Scotland and at Skudesnaes, westerly on most of our other coasts and over the North Sea, and easterly to north-easterly over France. Moderate generally, but fresh in the Shetlands and Hebrides. Northerly wind subsequently extending.

Sea rough on our N. and N.W. coasts.

Barometer falling over the whole of western Europe—briskly in Scandinavia. Anticyclone over our S.W. coasts, with small depression over Scotland and larger one over Sweden. Small depression travelling southward over us.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⇛ = a heavy gale; ➔ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	54	36	47·2	+0·4	7	0·57	−0·03	*	*
	Stornoway	56	42	48·1	+1·1	6	0·76	−0·34	5	7
	Wick	55	34	47·0	−0·4	6	0·65	−0·05	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	59	49	53·7	−1·2	1	0·02	−1·08	*	*
	Jersey (Noirmont)	60	44	52·6	−2·4	1	0·22	−0·61	19	25

The above observations made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	55	36	47·9	+0·7	5	0·61	+0·05	*	*
	Aberdeen	58	35	48·8	+0·9	3	0·23	−0·52	8	11
	Glenalmond	57	30	47·3	−0·5	0	—	?	12	17
	Leith	59	32	49·1	+1·4	1	0·32	−0·16	*	*
2. ENGLAND, N.E.	Shields	56	43	49·0	−0·8	3	0·26	−0·33	*	*
	Durham	58	37	48·4	−1·4	2	0·27	−0·43	9	12
	York	61	39	48·2	−2·3	1	0·44	−0·22	?	?
	Spurn Head	55	44	50·2	−0·3	2	0·07	?	*	*
	Kelstern (Lincolnsh.) ℳ	60	36	47·8	−3·2	2	0·09	−0·70	14	19
3. ENGLAND, E.	Hillington ℳ	58	37	49·2	−2·2	1	0·13	−0·26	12	16
	Yarmouth	57	41	50·4	−1·3	2	0·08	−0·57	*	*
	Geldeston	59	44	51·2	−0·5	3	0·13	−0·40	17	23
	Cambridge	58	33	47·9	−3·9	1	0·04	−0·46	23	31
	Rothamsted	57	32	47·6	−5·0	3	0·12	−0·56	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	57	36	48·2	−2·3	2	0·12	−0·54	*	*
	Nottingham	61	37	48·1	−2·9	2	0·04	−0·64	*	*
	Loughborough	62	34	48·0	−2·0	2	0·03	−0·66	*	*
	Leicester	59	32	47·7	−4·0	1	0·02	−0·58	18	25
	Birmingham (Oscott)	59	32	46·3	−4·9	1	0·09	−0·60	*	*
	Shrewsbury ℳ	57	32	44·5	−7·3	1	0·06	−0·64	*	*
	Churchstoke ℳ	58	31	44·4	−7·6	0	—	?	17	23
	Hereford ℳ	58	31	47·2	−5·5	1	0·01	−0·77	*	*
	Cirencester	58	36	47·8	−5·0	3	0·08	−0·69	24	32
	Oxford	59	35	48·8	−3·7	2	0·07	−0·58	25	34
5. ENGLAND, S.	London†	58	34	48·7	−3·8	3	0·05	−0·60	15	20
	Marlborough ℳ	59	34	47·7	−4·9	2	0·04	−0·79	*	*
	Strathfield Turgiss ℳ	59	35	47·9	−4·8	1	0·08	−0·57	*	*
	Dover	56	44	51·3	−1·9	2	0·44	−0·30	*	*
	Hastings (St. Leonard's)	58	44	51·1	−2·4	2	0·74	−0·01	*	*
	Southampton	58	41	50·5	−2·8	1	0·01	?	17	23
	Hurst Castle	58	43	50·6	−2·9	0	—	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	59	30	47·9	+0·1	5	0·47	?	*	*
	Glasgow	57	31	47·9	−0·1	2	0·18	−0·79	6	8
	Ardrossan	57	38	49·3	+0·8	2	0·13	−0·91	*	*
	Silloth (Cumberland)	58	33	47·5	−2·1	2	0 29	−0·65	5	7
	Douglas (Isle of Man)	59	37	47·9	−2·7	3	0·37	−0·58	19	26
7. ENGLAND, N.W.	Barrow-in-Furness	59	42	49·7	−0·6	3	0·21	?	*	*
	Stonyhurst	58	38	47·4	−3·3	2	0·21	−1·23	11	15
	Blackpool ℳ	56	36	48·3	−2·6	2	0·21	−0·94	*	*
	Manchester	56	37	47·5	−3·3	1	0·25	−0·86	*	*
	Liverpool Obsy (Bidston)	56	41	48·7	−3·0	1	0·10	−0·97	*	*
	Llandudno ℳ	57	40	49·7	−1·6	0	—	?	12	16
	Holyhead	55	43	49·1	−2·6	2	0·17	−1·03	*	*
8. ENGLAND, S.W.	Pembroke	57	41	50·0	−2·5	0	—	−1·05	34	46
	Barnstaple	63	39	51·2	−2·3	0	—	−1·28	*	*
	Falmouth	58	44	51·7	−3·2	0	—	−0·96	32	43
	Plymouth	59	42	50·9	−3·6	0	—	−0·95	*	*
	Prawle Point	61	40	51·2	−3·3	0	—	?	*	*
9. IRELAND, N.	Londonderry	56	32	47·7	−1·3	3	0·66	−0·44	*	*
	Mullaghmore	57	41	49·9	+0·4	2	0·14	?	*	*
	Markree Castle	57	29	46·3	−3·2	1	0·13	−0·76	6	8
	Brookeborough	59	34	47·1	−2·3	1	0·10	?	*	*
	Armagh	56	39	47·4	−2·3	2	0·10	−0·73	3	4
	Donaghadee	58	43	50·7	+1·5	1	0·20	?	*	*
10. IRELAND, S.	Dublin	57	40	48·5	−2·6	1	0·01	−0 70	22	30
	Parsonstown	57	31	49·9	−0·2	0	—	−0·81	29	40
	Waterford	58	36	47·1	−4·3	0	—	?	*	*
	Roche's Point	59	42	50·2	−1·5	0	—	−1·06	*	*
	Valentia	60	38	50·9	−0·7	1	0·02	−1·59	37	50
	Foynes	56	35	46·8	−4·2	1	0·10	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

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The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Geldeston, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Waterford, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.)				Rainfall. (Amounts in tenths of an inch.)			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E. -	53	23	37	9 below.	4	6	2 more.	34	50
	2. ENGLAND, N.E.	54	24	39	9 below.	4	4	2 less.	29	41
	3. ENGLAND, E. -	54	26	41	9 below.	4	5	1 less.	19	27
	4. MID. COUNTIES	53	21	39	11 below.	3	2	5 less.	22	32
	5. ENGLAND, S. -	53	26	41	11 below.	6	15	7 more.	15	21
Principal Grazing, &c. Districts.	6. SCOTLAND, W. -	55	23	38	9 below.	2	3	8 less.	34	47
	7. ENGLAND, N.W.	62	22	40	10 below.	2	2	8 less.	35	51
	8. ENGLAND, S.W.	58	29	43	9 below.	6	19	6 more.	26	37
	9. IRELAND, N. -	54	19	40	8 below.	2	2	8 less.	40	58
	10. IRELAND, S. -	53	21	41	9 below.	2	4	7 less.	35	50

General Remarks.

Weather has been generally fair over the greater part of the Kingdom, but very dull and wet in the S. and S.W. of England. Snow has fallen in many places, and on the 20th was very heavy over the south-eastern parts of England; at some stations hail showers occurred.

Temperature has been considerably below the mean in all districts, the deficit ranging from 8° in "Ireland, N.," to 11° over southern and central England. The lowest readings registered occurred on the 22nd, the thermometer falling to 19° at Markree Castle and to 21° at Parsonstown and Brookeborough. Over central England the minima ranged from 21° at Shrewsbury to 30° at Oxford.

Rainfall was more than the mean in "England, S.," "England, S.W.," and "Scotland, E.," but much less elsewhere. In the S. and S.W. of England the fall was greatly in excess, and at Falmouth the total fall during the week was 3·84 ins.

Bright sunshine shows an increase in all districts except "England, S.," and "England, S.W."; the percentage of total possible duration ranging from 58 in "Ireland, N.," to 21 in "England, S."

Wind was generally moderate from the northward in nearly all parts of the Kingdom during the first three days. By the 21st, however, a north-easterly breeze had appeared over the S. of England, which subsequently extended to all except the more northern stations (where the wind was westerly) and continued to prevail till the 24th, reaching the force of a gale in the S. and S.W. on the 21st and 22nd. At the close of the period the westerly current in the N. had spread to all except our south-western coasts.

Q 3362. 100,—10/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending October 25, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, October 19.

Weather fine over the central and northern parts of England and over the greater part of the Continent; cloudy or dull elsewhere, with rain at some western and snow at some northern stations. Dull and damp all day in the S. and S.E., fine in N. and W.

Temperature risen somewhat in the S.E., fallen considerably elsewhere. Readings ranging from 53° at Scilly to 32° at Wick and 31° at Parsonstown. Maxima low, and sharp frost in N. during following night.

Wind northerly on nearly all coasts, moderate in force generally, but blowing strongly in N. Germany and in the Hebrides. Moderate northerly breezes all day.

Sea high round the N. of Scotland.

Barometer rising in all places—briskly in the N.E. Area of high pressure lying over our northern and western districts, with low readings over the Gulf of Lyons and Gulf of Bothnia. Pressure decreasing during day except in Scandinavia.

Wednesday, October 20.

Weather fine in Ireland, the W. of Scotland, and N. of England, dull or cloudy elsewhere, with rain and sleet in the S. and S.E. Sky clearing generally later, but sleet showers still falling on our E. coast.

Temperature fallen in all places—quickly in S. Readings ranging from 26° at York to 46° at Scilly. Temperature low all day; maxima between 40° and 45° generally, and only 38° in London.

Wind northerly and north-easterly over these Islands and south-westerly to southerly over France and N. Germany; blowing a gale in the Hebrides and strongly on the S.W. coasts, but moderate generally. Fresh northerly breezes all day.

Sea rough in the S.W. and N.

Barometer falling everywhere—rapidly in the S.W.—and well marked depression shown near Jersey. Depression moving eastward later and barometer rising. Readings highest in W.

Thursday, October 21.

Weather wet in the W. of France, snowy over the Baltic and at Aberdeen, but fine or moderately so generally. Cloudy and showery in the extreme N. and S.W. during day, but fine elsewhere.

Temperature risen over our northern districts, fallen in the S. and over the Continent. Readings ranging over these Islands from 45° at Yarmouth to 23° at Parsonstown. Maxima between 45° and 50°, and sharp frost at night.

Wind northerly generally, but drawing into N.E. and E. in the S.W., and into N.W. and W. in the S.E. Moderate to fresh on our coasts, strong to a gale over Bay of Biscay and to the eastward of the North Sea. Little change later.

Sea rough in the E. and N.E.

Barometer rising over the British Isles, falling on the Continent. Area of high pressure lying over our western coasts with depression over the Baltic and the W. of France. Pressure increasing during day, but fresh fall appearing in S.W.

Friday, October 22.

Weather fine over Scandinavia, Denmark, and nearly all our western and northern stations, dull in the S., and wet in the S.W. Dull and rainy, except in the N., all day.

Temperature risen in the S.E. of England and the S. of Ireland, fallen elsewhere; readings ranging from 28° at York to 47° at Yarmouth. Maxima between 45° and 50° generally, and slight frost again at night.

Wind north-westerly in Scotland, but easterly on all our other coasts, and south-westerly over the Bay of Biscay. Blowing a gale over the Channel, and strongly on all S.W. coasts, but moderate elsewhere. No change later.

Sea rough to high in the S.W. and S.

Barometer rising slowly in N. and briskly over Scandinavia, but falling quickly in S.W., and rather deep depression shown off Ushant. Rising in Scotland all day, falling in S., and depression travelling eastward up Channel.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, October 23.

Weather fine at our western and northern stations, over Denmark, and S. France, but cloudy or dull elsewhere, with rain over the Channel. Sky clearing considerably in S.E. later, and weather fine except in England S.W.

Temperature fallen in the S.E., risen in most other places. Readings still low, ranging from 46° at Scilly to 30° at Aberdeen. Maxima between 45° and 50° generally, sharp frost over central England at night.

Wind north-westerly in Scotland, easterly on all our other coasts, and westerly over the Bay of Biscay; blowing a gale in S.W., and fresh or strong except in Scotland. Wind less strong later, but little other change.

Sea rough to high in the E., S., and W.

Barometer rising except over the Netherlands. Pressure highest over Scotland, with depressions over the Channel and Belgium. Former apparently filling up, latter travelling eastward. Mercury rising all day, except in N.

Sunday, October 24.

Weather fine very generally, but dull and showery on our N.W. coasts and to the eastward of the North Sea. Fine in most places all day but dull in the N.W. of Scotland and Ireland.

Temperature risen over Scotland and Scandinavia, fallen considerably elsewhere. Readings low over England and Ireland, ranging from 48° at Scilly to 24° at Parsonstown. Frost again at night over central England and Ireland.

Wind north-westerly over Scotland and the North Sea, and easterly over France, the Channel, and S. of Ireland. Variable airs reported from central England. Northerly winds general during day.

Sea rough in the S.W. and N.W.

Barometer falling briskly over Scandinavia, risen quickly over these Islands and France. High and uniform pressures over these Islands, with low readings over N. Norway. Changes irregular during day, but general distribution unaltered.

Monday, October 25.

Weather rather variable; fine over France and at most stations in the S. and E. of England and Ireland, cloudy or dull elsewhere, rain falling in the Shetlands. Cloudy except in East during day.

Temperature fallen fast in France, risen several degrees at our stations. Readings ranging from 49° at Ardrossan to 36° at Hurst Castle. Maxima between 50° and 55° generally. Slight frost in following night in N. Scotland.

Wind easterly over France and at Scilly, westerly on our other coasts. Blowing freshly over the Bay of Biscay, but moderately generally. Southerly wind appearing in the S.W. later.

Sea slight or moderate except at Mullaghmore.

Barometer risen over the N. of France fallen over these Islands—quickly in N. Scotland. Slight depression shown in the N. Pressure giving way all day, disturbance travelling slowly eastward. Fall in S.W. considerable at night.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⇛ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	45	29	37·1	−8·0	7	0·78	+0·18	*	*
	Stornoway	49	26	37·2	−8·4	6	1·07	−0·03	27	40
	Wick	50	23	37·0	−8·9	5	1·18	+0·48	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	56	39	46·6	−6·7	5	3·08	+1·99	*	*
	Jersey (Noirmont)	60	38	46·8	−6·3	5	2·91	+2·07	23	32

The above observations made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	47	25	35·6	−10·4	6	1·22	+0·69	*	*
	Aberdeen	50	25	37·1	− 9·1	5	0·55	−0·15	24	36
	Glenalmond	51	23	37·5	− 8·5	0	—	?	43	63
	Leith	53	26	38·8	− 7·2	5	0·54	+0·11	*	*
2. ENGLAND, N.E.	Shields	50	29	38·2	− 9·9	5	0·57	+0·09	*	*
	Durham	54	24	37·5	−10·7	6	0·66	−0·03	27	39
	York	53	24	38·2	−10·2	3	0·15	−0·46		?
	Spurn Head	50	30	42·9	− 5·8	4	0·30	?	*	*
	Kelstern (Lincolnsh.) ℳ	50	28	38·8	−10·3	4	0·35	−0·43	30	43
3. ENGLAND, E.	Hillington ℳ	50	26	39·7	− 9·9	3	0·68	+0·02	13	19
	Yarmouth	49	33	42·7	− 7·1	3	0·54	−0·07	*	*
	Geldeston	54	31	41·7	− 8·3	5	0·53	−0·02	27	39
	Cambridge	51	26	39·5	−10·4	3	0·18	−0·25	17	24
	Rothamsted	49	29	39·4	−10·9	5	0·51	−0·10	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	50	23	38·6	−10·2	3	0·12	−0·50	*	*
	Nottingham	51	25	38·0	−11·1	3	0·21	−0·41	*	*
	Loughborough	51	24	38·8	− 9·6	2	0·08	−0·53	*	*
	Leicester	51	28	40·4	− 9·5	3	0·10	−0·45	20	29
	Birmingham (Oscott)	51	26	39·2	−10·4	2	0·05	−0·67	*	*
	Shrewsbury ℳ	51	21	36·3	−13·7	3	0·11	−0·56	*	*
	Churchstoke ℳ	51	22	36·8	−13·2	1	0·08	?	23	33
	Hereford ℳ	53	23	39·6	−11·2	1	0·07	−0·65	*	*
	Cirencester	48	29	39·5	−11·5	4	0·35	−0·37	24	34
	Oxford	50	30	40·5	−10·3	3	0·48	−0·12	22	31
5. ENGLAND, S.	London†	50	29	40·2	−10·6	6	1·35	+0·75	14	20
	Marlborough ℳ	50	26	39·0	−11·8	4	0·71	−0·04	*	*
	Strathfield Turgiss ℳ	50	27	40·6	−10·3	5	1·17	+0·57	*	*
	Dover	50	27	42·6	− 8·7	6	1·79	+1·02	*	*
	Hastings (St. Leonard's)	51	31	41·9	−10·0	6	1·95	+1·20	*	*
	Southampton	52	28	40·4	−10·9	6	1·83	?	15	21
	Hurst Castle	53	30	41·1	−10·9	6	1·55	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	51	26	38·4	− 8·1	3	0·75	?	*	*
	Glasgow	49	24	38·0	− 8·4	1	0·04	−0·88	31	46
	Ardrossan	55	26	38·8	− 8·4	1	0·09	−0·93	*	*
	Silloth (Cumberland)	53	23	37·6	−10·6	2	0·14	−0·76	37	54
	Douglas (Isle of Man)	52	26	39·4	− 9·4	4	0·21	−0·79	34	49
7. ENGLAND, N.W.	Barrow-in-Furness	52	28	40·3	− 8·6	2	0·13	?	*	*
	Stonyhurst	47	24	37·4	−11·7	2	0·31	−1·08	35	51
	Blackpool ℳ	51	22	37·5	−11·6	2	0·22	−0·86	*	*
	Manchester	50	27	38·4	−10·9	2	0·27	−0·75	*	*
	Liverpool Obsy (Bidston)	50	30	40·6	− 9·4	2	0·41	−0·54	*	*
	Llandudno ℳ									
	Holyhead	62	36	44·0	− 6·1	4	0·28	−0·82	*	*
8. ENGLAND, S.W.	Pembroke	52	34	42·5	− 8·5	4	0·43	−0·60	31	44
	Barnstaple	58	30	44·1	− 7·9	3	0·76	−0·49	*	*
	Falmouth	54	38	44·2	− 9·1	6	3·84	+2·80	21	30
	Plymouth	54	29	41·3	−11·7	5	1·51	+0·62	*	*
	Prawle Point	55	33	43·0	−10·0	6	3·05	?	*	*
9. IRELAND, N.	Londonderry	52	27	38·8	− 9·0	4	0·25	−0·86	*	*
	Mullaghmore	52	34	42·6	− 5·4	3	0·17	?	*	*
	Markree Castle	54	19	37·7	−10·2	1	0·03	−0·85	40	58
	Brookeborough	52	21	37·9	−10·1	1	0·13	?	*	*
	Armagh	51	26	38·2	−10·0	2	0·09	−0·70	39	57
	Donaghadee	52	33	42·7	− 5·2	4	0·22	?	*	*
10. IRELAND, S.	Dublin	50	28	40·6	− 9·1	3	0·09	−0 62	33	47
	Parsonstown	50	21	36·3	−12·4	1	0·06	−0·72	31	44
	Waterford	51	27	40·5	−10·1	3	0·28	?	*	*
	Roche's Point	52	33	42·9	− 7·2	4	0·97	−0·09	*	*
	Valentia	52	32	43·2	− 6·8	2	0·31	−1·25	41	59
	Foynes	53	30	40·0	− 9·3	1	0·45	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.

† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 44.] WEEK ENDING MONDAY, NOVEMBER 1, 1880. [*Price 2d.*

[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Geldeston, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Waterford, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	DISTRICTS.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	55	28	39	6 below.	4	5	0 (average).	21	33
	2. ENGLAND, N.E.	51	24	40	7 below.	4	23	18 more.	18	27
	3. ENGLAND, E.	56	27	42	5 below.	5	15	10 more.	18	27
	4. MID. COUNTIES	58	23	40	8 below.	4	27	20 more.	12	18
	5. ENGLAND, S.	60	27	44	6 below.	4	15	11 more.	18	26
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	52	26	40	7 below.	3	10	2 more.	20	31
	7. ENGLAND, N.W.	52	26	41	7 below.	4	21	11 more.	19	29
	8. ENGLAND, S.W.	59	29	46	5 below.	5	20	13 more.	17	25
	9. IRELAND, N.	53	26	41	5 below.	4	4	4 less.	19	28
	10. IRELAND, S.	54	24	41	7 below.	5	24	14 more.	22	32

General Remarks.

Weather during the greater part of this period has been very cold, unsettled, and boisterous, with exceedingly heavy rain at nearly all stations. Snow and hail showers occurred at many of the northern stations, and at Southampton a thunderstorm was experienced. During the last two days, however, the weather was much finer and the sky comparatively clear.

Temperature was several degrees below the mean in all districts, the deficit ranging from 5° to 8°. The thermometer was lowest during the latter part of the period, when a reading of 23° was recorded at Bawtry; in most other places the minima varied from 24° to 29°.

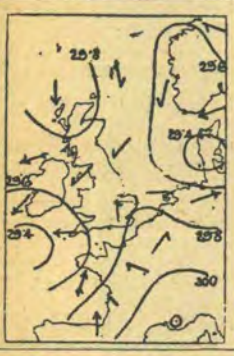
Rainfall was less than the mean in "Ireland, N.," and equal to it in "Scotland, E.," but in all other districts the amounts were very large. In the "Midland Counties" the fall was 20, and in "England, N.E.," 18, tenths more than the mean value.

Bright sunshine was less prevalent than during last week in nearly all places, the percentage of total possible duration ranging from 33 in "Scotland, E.," to 18 in the "Midland Counties." At Leicester the sunshine for the whole week was only three quarters of an hour.

Wind has varied greatly both in direction and force. At the commencement of the period it was fresh from N.E. or E. on all our coasts, but by the 27th it had shifted to S.W. at the extreme south-western stations and freshened to a gale in Ireland and the S.W. of England. On the 28th a severe gale was blowing in all parts of the Kingdom, from W. and S.W. in the S. and S.E., from E. in the N., and from N. in the W. By the 29th, however, the wind had moderated on all except our S.E. coast and veered to the northward, and during the remainder of the period moderate or fresh westerly or north-westerly breezes were experienced at nearly all our stations.

Q 3449. 100.—11/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending November 1, 1880.

Synoptic Weather Charts.—8 a.m.		Weather during the 24 hours succeeding the date of the Charts.
Barometer and Wind.	Cloud, Rain, Sea, and Temperature.	
		**Tuesday, October 26.** *Weather* very unsettled over the whole country, heavy rain falling over our southern districts and the N. of France, and snowshowers in N. Scotland. Rain continuing all day in S., but slight improvement in Scotland. *Temperature* fallen in the N., risen in S.W. and over France; readings ranging from 54° at Scilly to 31° in the Shetlands. Maxima between 55° and 60° in the S.W., between 45° and 50° in most other places. *Wind* variable—strong to a gale from S.W. in W. France, fresh or strong from E. over Ireland, and England S.W., moderate from S.W. in the S.E., and from N. over Scotland. Wind rising to a gale in W. later. *Sea* high in N., rough in W. and S.W. *Barometer* falling everywhere, readings highest over S. France and relatively high in Scotland, with large depression off our S.W. coasts, and a second over Denmark. Pressure giving way all day and depression in S.W. becoming deeper.
		Wednesday, October 27. *Weather* fine in the N.E. of Scotland, cloudy, dull, and unsettled elsewhere, with rain over our western and central districts. Rainy all day except in Scotland. *Temperature* risen over France, our southern and south-eastern stations, and in N. Scotland, fallen elsewhere; readings ranging from 57° at Scilly to 34° in the Shetlands. Thermometer rising considerably in S.E. later. *Wind* blowing from S. and S.W. over France and the Channel, and from E. on nearly all our coasts, but from N. in Scotland. Moderate or fresh on our E. and N. coasts, strong to a gale in W., south-westerly wind extending to our S.E. stations later, and gale increasing in W. *Sea* high at Valentia, rough at nearly all the south-western and western ports. *Barometer* falling in nearly all places, briskly generally and quickly in the S.W. Deep depression shown off the S. of Ireland, with smaller disturbances passing up the Channel. Pressure giving way all day.
		Thursday, October 28. *Weather* inclined to improve in W. Ireland, but heavy rain falling over nearly the whole of England, and snow showers in Scotland. Clearing considerably in Ireland and the N.W. of Scotland later, but heavy rain holding elsewhere. *Temperature* fallen in the S.W., risen in nearly all other parts of these Islands. Readings ranging from 54° at Dover to 36° at Sumburgh Head. Thermometer falling somewhat during day. *Wind* blowing a very severe gale on nearly all our own and neighbouring coasts—from W. in the Channel and France, from S.W. to S. in the S.E., and from E. to N. in the N. and W. Gales subsiding in W. Ireland, continuing unabated elsewhere. *Sea* rough or high all round our coasts, in the N.E., S.W., and N.W., running exceedingly high. *Barometer* recovering somewhat in the extreme W., falling very quickly elsewhere, and very deep depression passing eastward across central England. Disturbance passing away over North Sea later, and recovery in W. extending to all coasts.
		Friday, October 29. *Weather* become fine over the greater part of the Kingdom and N. of France, but rain still falling in the S.E. and over the Netherlands. Moderately fine all day generally, but showers falling in the N. and N.E. *Temperature* fallen nearly all places, quickly in the S.E. Readings low, ranging from 47° at Scilly to 37° in London and 35° in the Hebrides. Maxima below 50°, and sharp frost experienced at night. *Wind* northerly at all our ports, westerly over France, and south-westerly to southerly in the Netherlands and N. Germany. Moderating generally, but still blowing a gale in the N.W. and S.E. Fresh or moderate northerly breezes all day. *Sea* rough to high generally. *Barometer* falling fast to the eastward of the North Sea, rising very quickly over these Islands and France. Area of high pressure forming over our W. coasts, and depression passing away over Holland. Rise continuing all day, and amounting to half an inch in ten hours (8 A.M. to 6 P.M.) in the S.E.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, October 30.

Weather fine over the southern half of the United Kingdom, as well as over France, N. Germany, and Denmark; cloudy elsewhere, with rain in the extreme N. Weather fine all day over England and France.

Temperature risen somewhat in the N., fallen several degrees elsewhere. Readings low, ranging from 46° at Scilly to 30° at Nottingham and 27° at Parsonstown. Maxima between 45° and 50° generally, and slight frost experienced at inland stations at night.

Wind westerly in the N., north-westerly and northerly in the S.E., and easterly over France; fresh in force in the N., moderate elsewhere. Not much change during day, but wind veering to N.W. in N.

Sea rough at Spurn Head and Sumburgh Head.

Barometer fallen in extreme N., risen elsewhere,—the change in the S.E. exceeding three quarters of an inch. Anticyclone formed over Ireland and England, with a depression to the northward of the Shetlands. Barometer falling in the E. during day.

Sunday, October 31.

Weather fine over the greater part of France and the United Kingdom, but cloudy on our western and northern coasts, with rain at Nairn and Aberdeen. Sky clear in S., but dull and showery in N. all day.

Temperature fallen in France and Scotland, risen elsewhere; readings ranging from 50° at Mullaghmore to 36° at Oxford and 33° at Sumburgh Head. Maxima between 45° and 55° and slight frost in N.E. at night.

Wind between N.W. and W. all over the United Kingdom and the countries to the eastward of the North Sea, easterly over France. Blowing freshly in the N.W. and N.E. Wind veering and increasing to a slight gale in Scotland.

Sea moderate or slight generally.

Barometer rising over France, our S.W. coasts, and the S. of Scandinavia, fallen generally. Anticyclone shown in S.W. with large depression over Sweden and smaller one over Scotland. Barometer falling in E. and rising in W. later.

Monday, November 1.

Weather cloudy in the W. and S., fine in the E. and N.; slight rain falling in the S.W. No change during day.

Temperature risen in the S., fallen in the N., and readings ranging from 52° at Scilly to 32° at Shields. Maxima a little above 50° in S.W., between 40° and 49° elsewhere, and sharp frost setting in over Great Britain at night.

Wind northerly to north-westerly generally, but drawing into N.E. over the S. of France. Blowing freshly or strongly over the North Sea, but moderately on our coasts. Moderate breezes between N.W. and N.E. all day.

Sea slight except in the E.

Barometer rising except over Denmark—quickly in Scotland—and depression noticed on our N.E. coasts on 31st shown over the Sound. Pressure giving way in S.W. at night, rising briskly in N.E. and E.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	46	25	36·1	−7·8	7	0·73	+0·12	*	*
	Stornoway	48	30	38·2	−6·6	5	1·05	−0·05	23	37
	Wick	48	27	37·4	−7·0	6	0·45	−0·25	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	59	41	48·7	−3·3	6	0·89	−0·15	*	*
	Jersey (Noirmont)	62	39	49·2	−2·7	5	1·65	+0·85	32	46

The above observations made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	45	31	37·7	− 6·8	5	0·63	+0·09	*	*
	Aberdeen	47	32	39·2	− 5·3	7	0·57	−0·13	21	33
	Glenalmond	51	28	37·0	− 7·5	1	0·11	?	21	33
	Leith	55	33	40·7	− 3·8	2	0·57	+0·15	*	*
2. ENGLAND, N.E.	Shields	51	30	40·5	− 6·1	4	1·40	+0·80	*	*
	Durham	51	24	37·9	− 8·6	4	2·66	+1·97	19	29
	York	51	30	40·2	− 6·5	4	2·56	+1·95	?	?
	Spurn Head	51	35	42·5	− 4·4	4	1·98	?	*	*
	Kelstern (Lincolnsh.) ℳ	50	30	40·5	− 6·8	5	3·03	+2·33	16	24
3. ENGLAND, E.	Hillington ℳ	55	32	42·5	− 4·9	4	1·86	+1·49	14	21
	Yarmouth	55	34	42·9	− 4·9	5	1·07	+0·44	*	*
	Geldeston	56	32	43·2	− 4·0	5	1·06	+0·50	21	31
	Cambridge	56	29	41·9	− 5·6	4	1·51	+1·01	19	28
	Rothamsted	56	27	41·2	− 7·4	5	2·18	+1·60	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	49	23	39·7	− 7·1	4	3·32	+2·72	*	*
	Nottingham	51	26	39·2	− 8·3	4	2·57	+1·99	*	*
	Loughborough	51	29	40·8	− 5·9	3	2·33	+1·75	*	*
	Leicester	50	29	40·9	− 6·9	4	2·12	+1·59	1	1
	Birmingham (Oscott)	50	29	39·1	− 8·5	3	2·95	+2·26	*	*
	Shrewsbury ℳ	50	25	38·5	− 9·5	3	3·54	+2·92	*	*
	Churchstoke ℳ	50	25	37·8	−10·2	3	3·49	?	12	18
	Hereford ℳ	55	24	41·1	− 7·6	4	2·15	+1·47	*	*
	Cirencester	57	26	40·7	− 8·0	4	2·71	+2·02	17	25
	Oxford	58	31	42·2	− 6·5	4	1·90	+1·31	18	27
5. ENGLAND, S.	London†	59	28	43·0	− 5·9	4	1·65	+1·10	15	22
	Marlborough ℳ	57	27	41·4	− 7·5	3	1·66	+0·96	*	*
	Strathfield Turgiss ℳ	58	28	42·2	− 6·6	4	1·47	+0·88	*	*
	Dover	60	35	44·7	− 4·7	5	1·23	+1·42	*	*
	Hastings (St. Leonard's)	59	33	45·0	− 4·6	3	1·87	+1·07	*	*
	Southampton	59	29	43·7	− 5·3	3	1·35	?	20	29
	Hurst Castle	60	31	45·6	− 4·8	3	1·38	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	50	27	39·2	− 6·3	3	0·56	?	*	*
	Glasgow	50	29	38·9	− 6·0	3	0·56	−0·33	18	28
	Ardrossan	52	31	39·6	− 6·3	4	0·39	−0·71	*	*
	Silloth (Cumberland)	50	26	39·0	− 7·7	2	0·44	−0·38	22	34
	Douglas (Isle of Man)	52	30	40·9	− 6·3	3	3·15	+2·13	21	32
7. ENGLAND, N.W.	Barrow-in-Furness	52	32	41·0	− 5·5	4	1·60	?	*	*
	Stonyhurst	48	27	39·0	− 8·2	4	1·75	+0·43	19	29
	Blackpool ℳ	51	26	40·9	− 6·5	4	1·84	+0·86	*	*
	Manchester	48	27	39·2	− 8·3	3	1·22	+0·24	*	*
	Liverpool Obsy (Bidston)	50	34	41·6	− 6·5	4	2·00	+1·15	*	*
	Llandudno ℳ	51	33	42·2	− 5·8	3	3·21	?	?	?
	Holyhead	51	37	43·7	− 4·8	5	3·74	+2·66	*	*
8. ENGLAND, S.W.	Pembroke	57	36	45·6	− 3·5	5	2·89	+1·89	12	18
	Barnstaple								*	*
	Falmouth	59	38	47·4	− 4·5	6	2·80	+1·68	22	32
	Plymouth	59	29	43·4	− 3·1	5	1·15	+0·32	*	*
	Prawle Point	59	33	46·5	− 4·7	4	1·15	?	*	*
9. IRELAND, N.	Londonderry								*	*
	Mullaghmore	52	29	43·4	− 2·1	3	0·30	?	*	*
	Markree Castle	53	27	39·9	− 6·6	3	0·24	−0·57	23	35
	Brookeborough	49	26	38·9	− 7·6	4	0·58	?	*	*
	Armagh	50	33	39·8	− 7·2	5	0·43	−0·31	14	21
	Donaghadee	53	36	42·3	− 3·3	3	0·65	?	*	*
10. IRELAND, S.	Dublin	50	31	41·1	− 7·1	4	3·89	+3·19	22	33
	Parsonstown	52	24	38·7	− 8·5	4	1·56	+0·84	18	27
	Waterford								*	*
	Roche's Point	51	33	42·5	− 6·3	4	2·23	+1·15	*	*
	Valentia	54	31	43·1	− 4·9	7	1·92	+0·47	25	37
	Foynes	50	24	39·8	− 8·0	6	1·86	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.
† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 45.] WEEK ENDING MONDAY, NOVEMBER 8, 1880. [*Price 2d.*

[*Annual subscription, post paid,* 12*s.* 6*d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Geldeston, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Waterford, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	56	19	41	3 below.	2	2	3 less.	28	46
	2. ENGLAND, N.E.	55	21	41	4 below.	2	2	5 less.	27	43
	3. ENGLAND, E.	56	24	41	5 below.	3	2	3 less.	28	44
	4. MID. COUNTIES	54	18	40	6 below.	1	1	5 less.	24	37
	5. ENGLAND, S.	54	23	42	5 below.	1	1	6 less.	24	37
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	56	20	42	3 below.	4	9	3 less.	23	36
	7. ENGLAND, N.W.	54	21	42	4 below.	2	5	4 less.	25	40
	8. ENGLAND, S.W.	56	33	45	4 below.	2	2	8 less.	22	34
	9. IRELAND, N.	55	22	43	2 below.	4	3	6 less.	14	22
	10. IRELAND, S.	59	23	45	2 below.	2	2	7 less.	18	29

General Remarks.

Weather has been rather fine on the whole in nearly all parts of the Kingdom; on the 6th, however, rain fell at several stations, and on the 7th slight rain fell in nearly all places. Bright aurora was seen in nearly all parts of the Kingdom during the evening of the 3rd.

Temperature was again below the mean in all districts; over England the deficit ranged from 4° to 6° and elsewhere from 2° to 3°. The thermometer was generally lowest during the first few days, the lowest readings of all occurring on the 2nd, when temperature went down to 18° at Shrewsbury and 19° at Glenalmond; in most other places the minima varied from 20° to 24°.

Rainfall was considerably less than the mean in all districts.

Bright sunshine was more prevalent than during last week in all except the Irish districts. The percentage of total possible duration ranged from 22 in "Ireland, N.," to 46 in "Scotland, E."

Wind until the 5th was generally light from the eastward at the southern stations and from the westward over the northern parts of the Kingdom, but by the 6th it had shifted to the westward on all our coasts and continued to blow from W. or N.W. during the remainder of the period. In force the westerly current was generally moderate or light, but on the 9th it increased to a fresh or strong gale over Scotland and the N. of England and Ireland.

Q 3551. 100.—11/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending November 8, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, November 2.

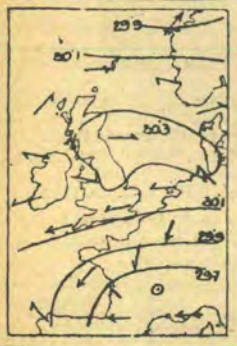
Weather dull in the W. of France, the extreme W. and N. of these Islands, and over Scandinavia, exceedingly fine and bright elsewhere. Fine all day except in W. Some rain falling in S.W.

Temperature higher over Sweden, lower in most other places, —decrease exceeding 10° over central England. Readings ranging from 48° at Scilly to 24° at Nottingham. Maxima between 40° and 45° generally, but between 45° and 50° in the S.

Wind northerly on our E. coast and over the North Sea, easterly to southerly in the W., S., and N. Blowing freshly in the S.W. Easterly wind increasing to a gale over France and the Channel later.

Sea rough at Jersey.

Barometer rising briskly over Scandinavia, but falling elsewhere,—quickly over France and our S.W. coasts. Large anticyclone extending from N. to S. over the North Sea and the E. of these Islands. Pressure giving way all day, and large depression appearing over France.



Wednesday, November 3.

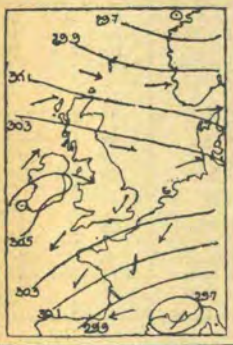
Weather wet in the S. of France, and dull over the Bay of Biscay and in Norway, fine and bright elsewhere. Very fine all day, except over Scandinavia, and scarcely any rain falling.

Temperature fallen several degrees on our S.W. coasts and over France, risen considerably elsewhere; readings ranging from 45° at Scilly and 41° in the Shetlands, to 28° at Parsonstown and 25° at Aberdeen. Maxima between 45° and 50°, and slight frost in E. at night.

Wind westerly to south-westerly over the northern half of our area, and easterly to north-easterly over the southern half. Blowing strongly to the force of a gale over France and the Channel. Little change later.

Sea rough round the Shetlands and Scilly, and in the Straits of Dover.

Barometer fallen in the S. and E. of France, and the N. of Norway; anticyclone lying from W. to E., and extending from Ireland to Denmark, with low pressure in S. France and N. Norway. Pressure increasing all day.



Thursday, November 4.

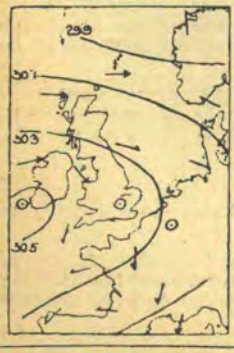
Weather dull and rainy in the extreme N. of Scotland and S. of France and over Scandinavia, but sky clear or nearly so in most other places. No change during day.

Temperature risen fast over Scotland, Denmark, the S. of Norway and Sweden, fallen elsewhere; readings ranging from 47° at Scilly and 48° in the Shetlands to 29° at Nottingham. Maxima between 40° and 45° generally but between 45° and 50° in the S.

Wind still westerly all over the more northern portion of our area, and easterly to north-easterly in the S. Both currents blowing freshly. Little change during day but wind veering towards N. in Channel.

Sea rough to the northward of Scotland and in the Channel.

Barometer rising over France, England, and Ireland, falling elsewhere. Readings decreasing from 30·55 ins. in Ireland to 29·3 ins. in Lapland and 29·7 ins. at Toulon. Pressure not changing much but rising in the S. and over France.



Friday, November 5.

Weather fine on our N.E. coasts and over a large part of the Continent, but cloudy at most of our stations and over Norway. Dense fog reported from our central and south-eastern stations. Rain setting in in the N. later and sky cloudy all day except in N.E.

Temperature risen at our western and northern stations, fallen elsewhere; readings ranging from 51° at Scilly to 28° at York, and decreasing to −1 Faht. at Haparanda. Maxima between 50° and 55° in the W. and N., between 45° and 50° in the S.E.

Wind westerly generally, but drawing into N. over the Channel and N.E. over France, and into S.W. and S. over Norway. Moderate to fresh in force. Westerly to northerly winds blowing all day.

Sea rough to the northward of Scotland.

Barometer rising on the Continent, falling over these Islands. Barometer marking 30·5 ins. at Valentia, and falling to 29·6 ins. in Lapland and 30·0 ins. at Toulon. Scarcely any alteration during day.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, November 6.

Weather fine on our N.E. coasts as well as over Denmark and Norway, cloudy or dull elsewhere with rain in the Hebrides. Sky cloudy all day except in the E. of England, and rain falling in the N. and N.W.

Temperature risen generally—change exceeding 10° in the E. of England—and readings ranging from 52° at Scilly and Nairn, to 40° at York. Maxima between 50° and 55° over the whole country.

Wind westerly over nearly the whole of these Islands, but northerly on our S. coast and north-easterly over France. Blowing a gale at Stornoway; fresh to light elsewhere. Gale extending to the Shetlands by noon, but wind dying down and veering to N.W. later.

Sea rough or high in the N.

Barometer rising on the Continent and our S. coast, falling elsewhere. Large depression lying to the northward of Scotland. Pressure giving way all day but slight recovery commencing at Stornoway at night.

Sunday, November 7.

Weather fine over the S.E. of England and the extreme N. of Scotland, but dull in nearly all other places, with rain at Mullaghmore and Leith, and snow in the N.W. of Norway. Sky clearing in N.W. later.

Temperature fallen fast in Scotland and briskly in Norway, but risen elsewhere—exceedingly quickly in Sweden. Readings ranging from 54° at Valentia to 36° at Stornoway and 23° at Bodö.

Wind easterly over France, westerly (N.W.—S.W.) elsewhere, moderate to fresh in force generally, but blowing a gale in W. Norway. Wind veering towards N. in the N.W. later.

Sea slight except in the west.

Barometer rising in Scotland and Norway, falling elsewhere—the change exceeding an inch in the N. of Sweden. Area of high readings lying over France, with slight disturbances off the E. of Scotland, and a deep depression over Lapland. Pressure increasing on our N.W. coasts all day.

Monday, November 8.

Weather fine over nearly the whole of this country and Sweden, but rain falling on our S.W. coasts, sky cloudy on the Continent generally and snow reported in the Shetlands. Weather fine in the E., cloudy in the W. all day.

Temperature fallen except in the S.W. Readings ranging from 53° at Scilly to 28° in the Shetlands. Rising somewhat during day but falling again at night, and sharp frost prevailing at inland stations.

Wind northerly to north-easterly in nearly all places, but westerly to north-westerly over the western half of the Channel and the N.W. of France. Wind backing to W. and S.W. on our N.W. coasts later, little other change.

Sea rough on the Norwegian coasts.

Barometer rising except over France and our S. coast. Large area of high pressure reported from our western coasts, with low pressures over the S. of Scandinavia. Barometer falling at Stornoway in the evening.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	52	26	41·5	−1·4	6	0·87	+0·27	*	*
	Stornoway	54	29	42·5	−1·3	6	1·26	+0·19	9	15
	Wick	54	21	38·2	−4·9	3	0·42	−0·28	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	53	42	48·9	−1·9	4	0·82	−0·18	*	*
	Jersey (Noirmont)	54	42	47·1	−3·3	3	0·18	−0·61	23	35

The above observations made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	55	28	41·1	− 1·8	5	0·50	−0·02	*	*
	Aberdeen	56	24	40·8	− 2·2	2	0·19	−0·50	36	43
	Glenalmond	53	19	38·1	− 4·8	0	—	?	30	49
	Leith	56	23	42·0	− 1·0	2	0·04	−0·39	*	*
2. ENGLAND, N.E.	Shields	53	26	40·9	− 4·0	1	0·03	−0·61	*	*
	Durham	55	21	39·3	− 5·5	0	—	−0·70	23	37
	York	55	23	44·1	− 0·8	1	0·30	−0·30	28	24
	Spurn Head	49	32	42·0	− 3·0	4	0·13	?	*	*
	Kelstern (Lincolnsh.) ⊕	50	28	40·4	− 4·7	4	0·28	−0·33	31	48
3. ENGLAND, E.	Hillington ⊕	50	27	40·7	− 5·1	4	0·26	−0·15	16	25
	Yarmouth	50	32	41·1	− 4·9	3	0·15	−0·50	*	*
	Geldeston	54	29	41·6	− 4·5	4	0·24	−0·34	36	56
	Cambridge	53	24	39·4	− 5·7	1	0·19	−0·21	32	50
	Rothamsted	56	24	41·0	− 5·6	4	0·18	−0·37	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	52	23	39·7	− 5·1	1	0·06	−0·49	*	*
	Nottingham	54	23	38·8	− 7·4	0	—	−0·54	*	*
	Loughborough	53	22	39·8	− 5·3	1	0·03	−0·52	*	*
	Leicester	53	24	40·5	− 5·0	0	0·01‡	−0·50	20	31
	Birmingham (Oscott)	53	24	41·4	− 4·1	1	0·03	−0·58	*	*
	Shrewsbury ⊕	53	18	39·2	− 7·0	1	0·04	−0·55	*	*
	Churchstoke ⊕	53	22	40·0	− 6·1	1	0·08	?	22	34
	Hereford ⊕	54	22	40·7	− 6·0	1	0·07	−0·58	*	*
	Cirencester	53	26	40·0	− 6·1	1	0·09	−0·56	26	41
	Oxford	54	26	41·4	− 5·0	2	0·09	−0·46	27	43
5. ENGLAND, S.	London†	54	26	41·4	− 4·4	1	0·11	−0·49	27	42
	Marlborough ⊕	52	26	40·3	− 6·4	1	0·13	−0·53	*	*
	Strathfield Turgiss ⊕	52	23	40·2	− 6·3	2	0·08	−0·47	*	*
	Dover	51	36	43·5	− 4·0	2	0·08	−0·74	*	*
	Hastings (St. Leonard's)	52	33	43·2	− 4·4	2	0·08	−0·62	*	*
	Southampton	52	31	41·9	− 5·6	1	0·06	?	21	32
	Hurst Castle	51	33	43·0	− 5·1	1	0·05	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	55	31	44·0	− 0·1	5	2·30	?	*	*
	Glasgow	53	23	40·8	− 3·0	3	0·79	−0·08	11	18
	Ardrossan	53	24	42·8	− 1·7	4	0·71	−0·26	*	*
	Silloth (Cumberland)	56	20	40·1	− 4·9	3	0·20	−0·55	28	45
	Douglas (Isle of Man)	54	25	43·0	− 2·7	3	0·60	−0·43	29	46
7. ENGLAND, N.W.	Barrow-in-Furness	54	28	42·7	− 2·3	3	0·34	?	*	*
	Stonyhurst	50	24	39·7	− 5·3	3	0·88	−0·37	25	40
	Blackpool ⊕	51	21	40·1	− 5·4	3	0·24	−0·60	*	*
	Manchester	54	27	40·4	− 5·8	2	0·69	−0·22	*	*
	Liverpool Obsy (Bidston)	51	29	42·3	− 3·9	1	0·23	−0·50	*	*
	Llandudno ⊕									
	Holyhead	53	33	44·5	− 2·5	2	0·40	−0·52	*	*
8. ENGLAND, S.W.	Pembroke	53	35	45·5	− 2·4	2	0·28	−0·67	26	41
	Barnstaple	54	35	45·0	− 3·0	2	0·26	−0·74	*	*
	Falmouth	52	37	45·9	− 4·6	3	0·18	−1·01	18	27
	Plymouth	54	33	43·8	− 5·7	1	0·02	−0·79	*	*
	Prawle Point	56	34	45·3	− 4·2	3	0·10	?	*	*
9. IRELAND, N.	Londonderry	53	31	43·4	− 1·6	6	0·39	−0·58	*	*
	Mullaghmore	54	35	46·0	+ 0·9	5	0·78	?	*	*
	Markree Castle	55	22	42·1	− 2·9	3	0·22	−0·59	15	23
	Brookeborough	53	23	41·2	− 4·0	3	0·39	?	*	*
	Armagh	52	32	42·4	− 2·9	2	0·14	−0·52	13	21
	Donaghadee	54	31	44·0	− 1·0	2	0·02	?	*	*
10. IRELAND, S.	Dublin	54	29	43·5	− 3·0	2	0·19	−0·50	19	30
	Parsonstown	54	23	41·2	− 4·6	2	0·25	−0·40	16	25
	Waterford								*	*
	Roche's Point	57	35	45·5	− 1·6	2	0·17	−0·93	*	*
	Valentia	55	33	46·1	− 0·2	3	0·26	−1·05	20	31
	Foynes	59	30	46·3	+ 0·2	2	0·30	?	*	*

Stations marked ⊕ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.
† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory. ‡ Dew.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 46.] WEEK ENDING MONDAY, NOVEMBER 15, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Geldeston, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Waterford, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	57	19	42	1 above.	6	11	4 more.	15	26
	2. ENGLAND, N.E.	60	25	46	2 above.	6	10	4 more.	9	15
	3. ENGLAND, E.	59	26	46	2 above.	6	12	6 more.	4	6
	4. MID. COUNTIES	63	22	47	3 above.	6	14	8 more.	7	11
	5. ENGLAND, S.	58	24	48	3 above.	6	11	5 more.	5	8
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	57	25	44	1 above.	7	23	13 more.	5	9
	7. ENGLAND, N.W.	59	25	46	2 above.	7	20	13 more.	6	10
	8. ENGLAND, S.W.	58	30	50	3 above.	7	16	8 more.	6	10
	9. IRELAND, N.	58	25	46	2 above.	7	26	18 more.	3	4
	10. IRELAND, S.	59	27	48	3 above.	6	19	11 more.	4	7

General Remarks.

Weather has been very dull in all parts of the Kingdom; heavy rain fell in nearly all places, and at some of the northern stations snow showers. A thunderstorm was experienced at Hastings on the 15th.

Temperature has been much higher than of late, and above the mean in all districts. The lowest of the minimum readings occurred on the 9th over England and on the 15th over Ireland and Scotland, and varied from 19° at Glenalmond to 22° at Cirencester and 25° at Brookeborough. The thermometer was generally highest on the 13th, when it rose to between 60° and 63° over central and north-eastern England.

Rainfall was more than the mean in all districts, the excess being very large over Ireland, "England, N.W.," and "Scotland, W." At Stonyhurst the total fall was 4·54 ins.

Bright sunshine was very scarce in all districts, the percentage of total possible duration being greatest (26) in "Scotland, E.," and least (4) in "Ireland, N."

Wind at the commencement of the period was south-westerly at all except our southern stations, and blew a fresh or strong gale in all the more northern districts. From the 10th until the 14th westerly or south-westerly winds prevailed, and, though moderate generally, blew a gale on the 13th and 14th at all except the Scotch stations. On the following day a fresh south-easterly breeze had appeared in the W. and a strong westerly breeze on our south-west coast, but elsewhere the wind was light and variable.

Q 3646. 100.—11/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending November 15, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, November 9.

Weather fine in the N. of France and S. of England, dull and rainy elsewhere. Snow falling at Skudesnaes and Cuxhaven. Weather clearing in Scotland later, remaining dull and unsettled generally.

Temperature fallen fast in the S., risen equally quickly in N.; readings ranging from 48° at Stornoway and at Valentia to 26° at Nottingham. Maxima a little above 50° in the N. and W. and below in the E. and S.

Wind northerly on our S.E. coasts and north-easterly over France, but westerly to south-westerly in all other places; blowing a fresh to strong gale in Scotland, light or moderate elsewhere. Wind veering to N.W. in Scotland later, and gales prevailing over all the northern parts of the Kingdom.

Sea rough to high in the N.W. and N.

Barometer rising in the S. as well as over Denmark and the S. of Scandinavia, falling elsewhere, quickly in Scotland. Deep depression shown near the Shetlands. Depression passing north-eastward, but barometer falling fast except in N.W.

Wednesday, November 10.

Weather cloudy or dull except in the E. of Scotland and S.E. of England. Showers falling in the S.W. Sky nearly clear all day in the E. of Great Britain, but cloudy with rain in the W.

Temperature fallen in the N.W., risen generally—very fast over the S. of England. Readings ranging from 52° at Valentia to 36° at Wick. Maxima between 50° and 56°; weather mild.

Wind westerly and north-westerly over nearly the whole of these Islands and the North Sea, but drawing into S.W. at Cuxhaven and into S.E. over the Skager Rack. Wind backing towards S. at Valentia, and south-westerly breezes spreading to all western coasts later.

Sea generally moderate or slight.

Barometer rising briskly in Scotland and some parts of France, falling elsewhere. Depression shown over Denmark. Barometer highest over France. Pressure increasing E., decreasing W. during day.

Thursday, November 11.

Weather dull and unsettled in nearly all parts of western Europe, with rain over the S. of England. Sky subsequently clearing in N.E., but dull wet weather continuing all day elsewhere.

Temperature risen, and readings high for the time of year; ranging from 54° at Scilly to 43° at Sumburgh Head. Maxima between 50° and 55° generally.

Wind easterly over France, westerly and south-westerly over nearly the whole of these Islands, and southerly on the eastern shores of the North Sea. Moderate in force in most places. Little change later.

Sea moderate or slight.

Barometer falling in nearly all places, but slight rise reported from the S. of Ireland and the S. of Scandinavia. Large area of high pressure over France, with depression to the northward of Scotland. Fall continuing slowly during day.

Friday, November 12.

Weather cloudy or dull in nearly all parts of western Europe, with rain over the S. of England. Sky clearing in the N.E. of Scotland later, but cloudy wet weather continuing elsewhere.

Temperature risen a little except in Scotland; readings still high generally, ranging from 55° at Scilly to 42° at Nairn. Maxima between 50° and 57°.

Wind south-westerly and westerly over nearly the whole of France and these Islands, and southerly to the eastward of the North Sea. Fresh in force over the Channel, moderate in most other places. Wind backing towards S. in Ireland later.

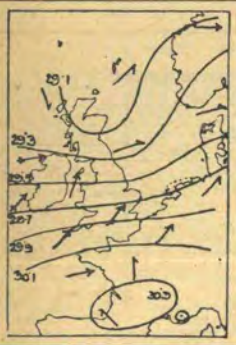
Sea moderate or slight except at Mullaghmore.

Barometer rising in the W. of France, falling in all other places. Area of high pressure still shown over France and of low pressure off the W. of Norway. Pressure giving way all day and little change in distribution.

Synoptic Weather Charts.—8 a.m.

Barometer and Wind. | Cloud, Rain, Sea, and Temperature.

Weather during the 24 hours succeeding the date of the Charts.



Saturday, November 13.

Weather dull or cloudy, except in the S. of France, with rain falling at several stations. Dull rainy weather continuing all day.

Temperature rising in nearly all places and readings high for season, ranging from 57° at Valentia to 45° in the Shetlands. Thermometer falling in the N. in the evening, but maxima between 55° and 60° over Ireland and England.

Wind light and variable in N. Scotland, but strong to a gale from W.S.W. over Ireland, England, and France, and moderate from the same quarter on the eastern shores of the North Sea. North-westerly winds reported from Scotland later but south-westerly gales elsewhere.

Sea rough to high on our W. and S. coasts.

Barometer falling over the whole of western Europe. Area of high pressure in S. France with deep depression near Shetlands. Barometer falling all day and fresh disturbance appearing near Valentia.

Sunday, November 14.

Weather fine in the S. of France, dull and unsettled in all other places, with rain at very many stations. Rainy all day in nearly all parts of the country, but clearing in the Hebrides.

Temperature fallen fast N. Scotland and slightly except over France and the S.E. of England. Readings high for season ranging from 55° in the S. and E. of England to 33° in the Hebrides. Rapid decrease of temperature occurring in N. during day.

Wind shifted to N.W. in Scotland, but southerly and south-westerly in all other places; blowing a gale over the greater part of Ireland, England, and France. Wind shifting to N. over Ireland later, but south-westerly gales holding in the Channel.

Sea rough to high except on the E. coast.

Barometer rising somewhat at Stornoway, falling in all other places. Deep depression passing across us during day; barometer rising in the N. and W., still falling in S. and E.

Monday, November 15.

Weather fine over a large part of Great Britain, but dull over the S. of England and most of Ireland, and the Continent. Sky clouding over everywhere later, and rain falling at most stations.

Temperature risen over France, fallen elsewhere, the change over north-eastern and central England amounting to about 20°. Readings ranging from 59° at Biarritz and 45° at Scilly to 25° at Wick. Thermometer rising slowly during day.

Wind north-westerly over our eastern districts and the North Sea, westerly in France, and south-easterly over Ireland. Blowing a gale over France and the Skager Rack. Gale spreading northward over the Channel later but moderate southerly breezes prevailing elsewhere.

Sea rough to high in the S.W. and W.

Barometer rising at most of our own and the French stations, and on the eastern shores of the North Sea, but fresh fall appearing in Ireland. Decrease from the W. spreading to all stations during day, and becoming very brisk in Ireland at night.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟩⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

Values for each Station in Scotland, N. and the Channel Islands.

Districts.	Names of Stations.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
Scotland, N.	Sumburgh Head	50	26	39·5	−2·4	6	1·00	+0·39	*	*
	Stornoway	54	26	41·4	−1·2	7	1·27	+0·24	9	16
	Wick	52	22	39·0	−3·1	6	0·62	−0·12	*	*
Channel Islands	Scilly (St. Mary's)	58	43	51·9	+2·7	7	1·24	+0·26	*	*
	Jersey (Noirmont)	57	42	50·6	+1·7	7	0·88	+0·14	8	13

The above observations made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	53	26	40·8	− 0·5	5	0·57	+0·04	*	*
	Aberdeen	56	27	43·0	+ 1·1	7	1·28	+0·58	14	25
	Glenalmond	55	19	41·2	− 0·2	7	1·23	?	15	26
	Leith	57	26	44·3	+ 2·8	6	1 12	+0·67	*	*
2. ENGLAND, N.E.	Shields	60	27	46·5	+ 3·2	6	0·75	+0·09	*	*
	Durham	60	25	44·7	+ 1 1	5	0·70	0·00	12	20
	York	59	28	46·1	+ 2·6	6	0·80	+0·20	9	15
	Spurn Head	58	32	46·0	+ 3·0	6	1·08	?	*	*
	Kelstern (Lincolnsh.) ⁂	58	26	44·6	+ 1·0	6	1·69	+1·14	6	10
3. ENGLAND, E.	Hillington ⁂	58	26	46·1	+ 2·5	5	1·62	+0·81	1	2
	Yarmouth	58	31	45·8	+ 1·7	6	1·04	+0·34	*	*
	Geldeston	58	29	46·8	+ 3·1	6	0·97	+0·38	2	3
	Cambridge	59	26	46·2	+ 2·7	6	1·03	+0·65	8	13
	Rothamsted	58	26	46·2	+ 1·7	6	1·35	+0·85	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	63	27	46·9	+ 3·9	5	1·31	+0·82	*	*
	Nottingham	60	24	45·6	+ 2·0	6	1·52	+1·03	*	*
	Loughborough	59	25	47·4	+ 3·9	6	1·45	+0·95	*	*
	Leicester	61	26	46·3	+ 2·7	6	1·32	+0·82	6	10
	Birmingham (Oscott)	59	26	47·3	+ 3·8	6	1·08	+0·53	*	*
	Shrewsbury ⁂								*	*
	Churchstoke ⁂	57	24	46·8	+ 2·5	6	2·09	?	5	8
	Hereford ⁂	61	24	47·7	+ 3·1	7	1·24	+0·63	*	*
	Cirencester	56	22	45·4	+ 1·4	7	1·59	+0·93	7	11
	Oxford	58	27	47·9	+ 3·7	7	1·00	+0·52	8	13
5. ENGLAND, S.	London†	58	27	47·5	+ 2·5	5	0·82	+0·37	6	10
	Marlborough ⁂	57	24	47·6	+ 2·9	6	1·18	+0·57	*	*
	Strathfield Turgiss ⁂	57	25	47·3	+ 2·6	6	1·05	+0·54	*	*
	Dover	56	35	47·4	+ 1·9	6	1·31	+0·42	*	*
	Hastings (St. Leonard's)	55	34	48·6	+ 3·0	6	1·37	+0·69	*	*
	Southampton	57	27	49·0	+ 4·0	5	0·98	?	4	6
	Hurst Castle	56	31	48·5	+ 3·4	6	0·93	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	52	27	42·8	− 0·2	5	2·58	?	*	*
	Glasgow	55	26	43·4	+ 0·8	7	2·04	+1·17	5	9
	Ardrossan	54	29	45·0	+ 2·0	7	2·07	+1·14	*	*
	Silloth (Cumberland)	54	25	44·0	+ 0·4	7	2·17	+1·43	6	10
	Douglas (Isle of Man)	57	26	46·2	+ 2·0	7	2·38	+1·36	5	8
7. ENGLAND, N.W.	Barrow-in-Furness	56	28	46·1	+ 2·5	6	1·40	?	*	*
	Stonyhurst	55	27	43·8	+ 0·3	7	4·54	+3·35	6	10
	Blackpool ⁂	54	25	45·2	+ 1·2	7	1·92	+1·17	*	*
	Manchester	58	27	44·7	+ 1·4	7	1·31	+0·42	*	*
	Liverpool Obsy (Bidston)	59	31	47·3	+ 2·9	6	1·35	+0·72	*	*
	Llandudno ⁂									
	Holyhead	55	37	49·5	+ 3·9	7	1·70	+0·88	*	*
8. ENGLAND, S.W.	Pembroke	55	35	49·2	+ 2·7	7	1·94	+1·04	2	3
	Barnstaple	58	30	49·8	+ 3·6	7	2·08	+1·20	*	*
	Falmouth	57	38	51·1	+ 2·3	7	1·98	+0·77	10	16
	Plymouth	58	33	50·1	+ 2·6	6	1·14	+0·34	*	*
	Prawle Point	56	35	49·1	+ 1·5	6	0·92	?	*	*
9. IRELAND, N.	Londonderry	56	28	45·7	+ 1·9	7	3·05	+2·17	*	*
	Mullaghmore	55	32	48·1	+ 4·3	7	3·23	?	*	*
	Markree Castle	57	27	46·8	+ 2·9	7	2·58	+1·78	2	3
	Brookeborough	56	25	44·6	+ 0·7	7	3·04	?	*	*
	Armagh	56	30	45·0	+ 1·0	7	1·90	+1·30	3	5
	Donaghadee	58	32	47·1	+ 3·2	7	1·71	?	*	*
10. IRELAND, S.	Dublin	59	32	48·1	+ 3·5	6	1·19	+0·52	4	7
	Parsonstown	57	27	47·0	+ 2·5	7	1·69	+1·09	5	8
	Waterford	56	27	? 46·9	?+ 2·1	7	1·43	?	*	*
	Roche's Point	57	34	49·1	+ 3·5	5	2·55	+1·44	*	*
	Valentia	58	37	51·0	+ 5·8	6	2·43	+1·23	4	6
	Foynes	58	30	47·3	+ 2·5	7	2·15	?	*	*

Stations marked ⁂ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.
† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 47.] WEEK ENDING MONDAY, NOVEMBER 22, 1880. [*Price 2d.*

[*Annual subscription, post paid*, 12*s.* 6*d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Geldeston, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Waterford, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	43	12	30	10 below.	4	7	3 more.	26	49
	2. ENGLAND, N.E.	49	14	35	8 below.	6	9	5 more.	18	22
	3. ENGLAND, E.	57	22	37	6 below.	5	5	0 (average).	21	36
	4. MID. COUNTIES	52	13	34	9 below.	3	1	3 less.	19	32
	5. ENGLAND, S.	54	16	37	7 below.	3	11	5 more.	21	35
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	45	15	31	11 below.	3	4	4 less.	16	29
	7. ENGLAND, N.W.	48	19	35	8 below.	3	5	4 less.	25	44
	8. ENGLAND, S.W.	55	25	40	6 below.	4	8	2 less.	30	50
	9. IRELAND, N.	45	16	35	9 below.	4	7	3 less.	25	44
	10. IRELAND, S.	51	22	37	7 below.	3	9	1 more.	27	46

General Remarks.

Weather has been rather cloudy, and very cold, and unsettled in all parts of the Kingdom; much snow has fallen in all the more northern districts, and sharp thunderstorms occurred at Dublin on the 18th and 19th.

Temperature has been much below the mean in all districts, the deficit ranging from 8° to 11° in nearly all places. At the commencement of the period the thermometer was comparatively high, and a reading of 57° was registered at Cambridge; but it soon fell rapidly and during the latter part of the week was exceedingly low. The minima for the period occurred at most stations on the 22nd, when temperature fell to 12° at Glenalmond, 13° at Leicester, and to 22° or below in all places except the extreme S.W. of our Islands.

Rainfall was rather more than the mean in the southern parts of England and Scotland, and the S. of Ireland, but less in all other districts.

Bright sunshine shows an increase in all districts, the percentage of total possible duration ranging from 50 in "England, S.W.," and 49 in "Scotland, E.," to 22 in "England, N.E.," and 29 in "Scotland, W."

Wind has been very changeable and occasionally very strong. On the 16th it blew a gale on all our coasts—from W. in the S., from S. in the E., from E. in the N., and from N. in the W. During the 17th, 18th, and 19th, its direction varied between E. and N. or N.W., and, though moderate generally, increased to a gale in the S.W. on the 18th, and in the S.E. on the 19th; on the following day moderate breezes from N.E. prevailed over Ireland and England, and from W. in Scotland, and during the remainder of the period the wind was very variable over the greater part of England, but strong southerly or south-easterly breezes prevailed at the western and north-western stations and reached the force of a gale in several places.

Q 3727. 100.—11/80. Wt. 26. E. & S.

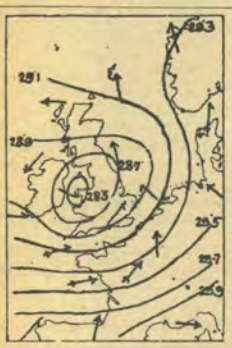
II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending November 22, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.



Tuesday, November 16.

Weather dull over nearly the whole of western Europe, with rain at the greater number of stations in the British Isles and N. of France. Rainy, squally, and dull all day, but slight improvement commencing in W. Ireland.

Temperature fallen Scandinavia, risen elsewhere; readings ranging from 60° at Biarritz to 8° at Hernösand. Maxima between 45° and 55° generally, and slight frost in W. at night.

Wind south-westerly and westerly in the S., southerly in the E., easterly in the N. and northerly in the W., blowing a severe gale in the S. and strongly generally. Gales blowing all day from W. in the S., and from N. elsewhere.

Sea rough to high in the N., W., and S.

Barometer risen quickly in Scandinavia, fallen rapidly over these Islands. Very deep depression shown over Irish Sea. Disturbance travelling east-north-eastward across us later, and pressure recovering west.

Wednesday, November 17.

Weather is fine over the southern half of the Kingdom, cloudy and unsettled on our other coasts and over the Continent generally. Sky clearing except in the W. later.

Temperature fallen almost everywhere, quickly in the S.E. Readings ranging from 47° at Scilly to 35° in London, and 32° at Ardrossan. Maxima between 35° and 45°, and sharp frost setting in at night.

Wind northerly on our northern and western coasts, westerly over England, the North Sea, and S.W. of France; blowing lightly over England, freshly or strongly elsewhere. Little change during day, but wind falling lighter.

Sea rough to high in the S., W., and N.

Barometer risen briskly over these Islands, fallen quickly on the continent. Yesterday's disturbance shown over Denmark, with smaller depression over France. Pressure increasing slowly all day.

Thursday, November 18.

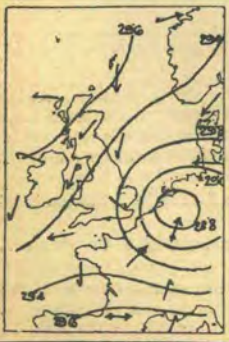
Weather fine over the greater part of these Islands, but dull, rainy, and foggy over the southern districts, the Channel, and France. Snow falling at Nottingham. Rain and snow falling all day in S. but fair weather prevailing elsewhere.

Temperature risen fast in Lapland, fallen several degrees elsewhere; readings ranging from 45° at Scilly, to 27° at Cambridge, and 23° at Ardrossan. Maxima again between 35° and 45°, but frost breaking.

Wind southerly over France, and easterly over England and Ireland with northerly breezes over Scotland. Gales reported from Bay of Biscay and fresh winds in the S.W., but wind light or moderate elsewhere. Strong easterly gales reported from the S. of England later.

Sea rough in the S.W. and round the Shetlands.

Barometer rising over the northern parts of these Isles and the countries to the eastward of the North Sea, falling quickly elsewhere. Deep depression near Scilly. Pressure giving way all day, disturbance growing deeper and travelling slowly up Channel.



Friday, November 19.

Weather fine on our W. coasts, cloudy or dull generally, with rain in the S.E., and snow or hail in Scotland. Sky clear all day in W. and clearing generally in evening.

Temperature fallen over Scandinavia and our S.W. coasts, risen considerably elsewhere. Readings ranging from 44° at Scilly to 24° at Parsonstown. Maxima between 35° and 45° and frost reported again at night.

Wind easterly in N. Germany, northerly on our coasts and over the Channel, and westerly to south-westerly over France and the Netherlands. Severe gales reported in the S.E. Gales dying down during day, fresh north-easterly winds general.

Sea high S.E., rough in S.W. and N.E.

Barometer fallen fast N. Germany, risen briskly elsewhere. Disturbance from Channel shown over Holland. Pressure increasing all day, and area of high readings forming in N.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, November 20.

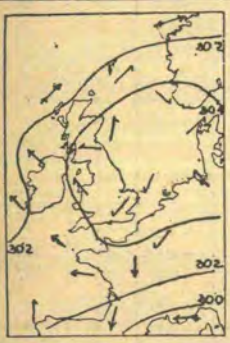
Weather dull and wet over the Straits of Dover, the N.E. of France, and the Netherlands, as well as in some parts of Scandinavia, fine and bright elsewhere. Very fine all day over the greater part of these Islands, but some snow in the S.E.

Temperature risen in the Shetlands, fallen in nearly all other places. Readings ranging from 42° at Scilly to 20° at Nairn. Maxima between 40° and 45° generally, but below 35° in the N.E. Sharp frost again at night.

Wind westerly in the N., northerly over the North Sea and Scandinavia, and north-easterly over England, Ireland, and France; moderate to fresh in force generally. No change of importance during day.

Sea rough in the S.W. and N.E.

Barometer risen rapidly generally. Disturbance reported from Holland on 19th quite disappeared, and area of high pressure in N. more marked. Pressure increasing slowly and uniformly all day.



Sunday, November 21.

Weather fine over nearly the whole of these Islands and N. of France, but cloudy in the S. of France and over Scandinavia. Sky becoming cloudy with rain in W. Ireland later, but weather remaining fine elsewhere.

Temperature risen briskly over Ireland and Scotland, fallen over England. Sharp frost at eastern and central stations. Readings ranging from 45° at Scilly to 19° at York. Maxima between 35° and 45° generally, but sharp frost again at night.

Wind easterly over France and the Channel, southerly in Ireland, and south-westerly in Scotland. Strong on many coasts. Calms reported over England. Little change later, but southerly winds spreading somewhat.

Sea rough in S.W. and N.

Barometer falling in W. and N.W., rising elsewhere. Large area of high pressure over England and the North Sea. Pressure giving way all day, and gradients for southerly winds spreading over us.

Monday, November 22.

Weather fine over nearly the whole of Great Britain and the W. of France, dull over Ireland, the E. of France, and the greater part of Scandinavia. Rain falling at Valentia. Fine all day over England, dull in Ireland.

Temperature risen several degrees in the N.E., fallen elsewhere. Readings ranging from 45° at Valentia to 20° at Nairn and 22° at Oxford. Frost prevailing in the E. all day.

Wind easterly over France and the Channel, south-easterly and southerly over Ireland and Scotland, and light and variable over England. Gales reported in Ireland. Southerly wind slowly spreading; little other change.

Sea rather high in the S.W. and rough at Stornoway and Christiansund.

Barometer risen briskly over Scandinavia, fallen quickly over these Islands and France. Areas of high pressure reported from the Baltic and central France, with depressions over the North Sea and off S. Ireland. Pressure giving way all day, but no change in distribution.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⇛ = a heavy gale; ⇒ = a gale; → = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	41	25	33·6	−7·5	4	0·26	−0·35	*	*
	Stornoway	42	20	32·7	−9·2	4	0·56	−0·44	18	35
	Wick	42	20	33·2	−8·3	5	0·85	+0·10	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	52	38	44·2	−3·8	5	0·80	−0·14	*	*
	Jersey (Noirmont)	53	33	42·9	−5·1	4	1·71	+0·99	24	39

The above observations made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	37	18	28·4	−11·6	4	1·26	+0·75	*	*
	Aberdeen	43	15	32·4	− 8·5	5	0·53	−0·17	24	45
	Glenalmond	38	12	28·5	−11·4	2	0·36	?	28	52
	Leith	42	21	32·0	− 7·2	3	0·65	+0·17	*	*
2. ENGLAND, N.E.	Shields	49	20	33·4	− 8·1	7	1·07	+0·39	*	*
	Durham	40	14	31·0	−11·5	4	1·10	+0·39	17	31
	York	48	19	33·8	− 8·2	5	0·76	+0·21	23	40
	Spurn Head	49	33	39·2	− 2·7	7	0·42	?	*	*
	Kelstern (Lincolnsh.) ℳ	47	22	35·0	− 6·9	6	1·29	+0·79	15	26
3. ENGLAND, E.	Hillington ℳ	56	22	36·2	− 6·5	4	0·51	+0·01	9	16
	Yarmouth	51	30	38·3	− 4·5	5	0·40	−0·36	*	*
	Geldeston	53	28	38·1	− 4·6	4	0·57	−0·02	27	46
	Cambridge	57	22	35·9	− 6·2	3	0·40	+0·01	27	46
	Rothamsted	50	22	34·2	− 8·7	6	0·65	+0·19	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	48	21	35·2	− 6·8	3	0·57	+0·07	*	*
	Nottingham	49	21	33·6	− 8·5	4	0·15	−0·33	*	*
	Loughborough	49	20	34·5	− 7·9	3	0·10	−0·39	*	*
	Leicester	49	13	33·6	− 8·3	3	0·18	−0·30	9	16
	Birmingham (Oscott)	47	17	33·5	− 9·1	3	0·08	−0·46	*	*
	Shrewsbury ℳ								*	*
	Churchstoke ℳ	46	16	30·9	−12·8	2	0·05	?	20	34
	Hereford ℳ	48	23	33·8	− 9·3	2	0·04	−0·58	*	*
	Cirencester	49	15	32·0	−10·6	3	0·25	−0·35	25	42
	Oxford	52	21	35·0	− 7·5	2	0·33	−0·07	22	37
5. ENGLAND, S.	London†	54	25	36·9	− 6·1	2	0·54	+0·11	22	37
	Marlborough ℳ	53	16	33·3	− 9·7	2	0·73	+0·13	*	*
	Strathfield Turgiss ℳ	53	22	34·7	− 8·3	2	0·36	−0·12	*	*
	Dover	52	32	39·4	− 4·2	5	1·98	+1·58	*	*
	Hastings (St. Leonard's)	53	30	38·9	− 4·8	6	2·55	+1·91	*	*
	Southampton	54	23	36·4	− 7·9	2	0·33	?	19	32
	Hurst Castle	53	25	39·0	− 5·5	3	1·05	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	40	21	32·0	−10·0	2	0·13	?	*	*
	Glasgow	40	15	28·5	−13·4	3	0·51	−0·37	5	9
	Ardrossan	43	21	30·8	−11·2	3	0·24	−0·66	*	*
	Silloth (Cumberland)	40	15	28·4	−14·2	2	0·72	+0·12	18	33
	Douglas (Isle of Man)	45	27	36·9	− 6·5	3	0·51	−0·49	26	46
7. ENGLAND, N.W.	Barrow-in-Furness	45	26	35·7	− 7·3	2	0·61	?	*	*
	Stonyhurst	44	20	32·9	− 9·6	2	0·16	−0·96	28	49
	Blackpool ℳ	46	19	33·2	− 9·8	3	0·49	−0·21	*	*
	Manchester	45	19	33·7	− 8·3	2	0·03	−0·79	*	*
	Liverpool Obs? (Bidston)	46	22	34·1	− 8·9	4	0·87	+0·34	*	*
	Llandudno ℳ	48	26	36·7	− 7·3	2	1·07	?	21	38
	Holyhead	46	29	37·6	− 6·7	5	0·54	−0·14	*	*
8. ENGLAND, S.W.	Pembroke	50	32	39·4	− 6·3	3	0·32	−0·56	31	53
	Barnstaple	54	25	39·3	− 5·7	4	0·77	−0·04	*	*
	Falmouth	55	34	41·5	− 5·6	6	1·36	+0·16	28	46
	Plymouth	51	29	40·2	− 5·9	3	0·28	−0·51	*	*
	Prawle Point	53	30	39·7	− 6·4	5	1·47	?	*	*
9. IRELAND, N.	Londonderry	42	18	32·7	−10·3	5	0·66	−0·16	*	*
	Mullaghmore	45	30	37·4	− 5·6	3	0·24	?	*	*
	Markree Castle	44	18	33·2	− 9·8	5	0·46	−0·32	24	42
	Brookeborough	42	16	32·6	−10·4	2	1·04	?	*	*
	Armagh	43	23	34·0	− 9·3	4	0·40	−0·26	26	46
	Donaghadee	45	28	37·6	− 5·4	3	1·58	?	*	*
10. IRELAND, S.	Dublin	46	29	36·0	− 7·5	5	1·22	+0·61	28	48
	Parsonstown	43	22	34·0	− 9·5	2	0·23	−0·37	25	43
	Waterford	51	27	37·3	− 6·8	6	1·09	?	*	*
	Roche's Point	48	28	39·1	− 5·1	3	1·45	+0·31	*	*
	Valentia	50	28	40·0	− 4·7	3	1·09	−0·02	28	47
	Foynes	46	28	36·9	− 6·9	1	0·18	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.
† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

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PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

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The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

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2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Geldeston, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Waterford, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	57	12	42	3 above.	4	4	1 less.	8	16
	2. ENGLAND, N.E.	57	18	45	3 above.	4	3	3 less.	9	17
	3. ENGLAND, E.	59	23	44	2 above.	5	3	2 less.	14	25
	4. MID. COUNTIES	58	17	45	3 above.	4	5	1 less.	14	24
	5. ENGLAND, S.	57	25	47	4 above.	4	8	1 more.	12	20
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	54	18	46	4 above.	6	16	8 more.	10	18
	7. ENGLAND, N.W.	59	22	46	4 above.	5	14	7 more.	14	25
	8. ENGLAND, S.W.	57	30	49	4 above.	5	12	4 more.	20	35
	9. IRELAND, N.	54	33	45	3 above.	6	11	4 more.	15	26
	10. IRELAND, S.	57	34	48	4 above.	7	15	7 more.	16	29

General Remarks.

Weather since our last issue has undergone a very sudden and decided change, having been very mild in all parts of the Kingdom, with rather heavy rain at the southern and western stations. Lightning was seen in several places and thunder occurred in London on the 25th and at Stornoway on the 26th.

Temperature has been a few degrees above the mean in all districts. The maxima were high for the time of year, varying in most districts between 57° and 59°, while the only time during which the thermometer was low was on the morning of the 23rd, when it fell to 12° at Glenalmond, 17° at Leicester, and 18° at Durham, Cirencester, and Silloth.

Rainfall was rather less than the mean over the central and eastern parts of England and E. of Scotland, but more in all other districts.

Bright sunshine shows a decrease in all places, the percentage of total possible duration ranging from 16 in "Scotland, E." to 35 in "England, S.W."

Wind was south-westerly or westerly in all parts of the Kingdom, and, though generally moderate or fresh in force, increased to a gale at times in the W. and N., and on the 25th and 26th blew a gale on all our coasts, the wind on the latter day being exceptionally violent at all our western and northern stations.

Q 3829. 100.—12/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending November 29, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, November 23.

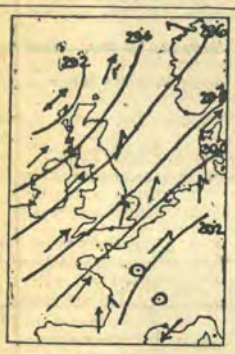
Weather fine in Ireland, cloudy or dull in nearly all other places. Changing considerably during day; clouding over in Ireland and clearing over France, the N.E. of Scotland, and parts of the S.E. of England. Some snow or rain falling very generally.

Temperature risen except in the extreme N.E., the increase in the E. of England amounting to more than 10°. Readings ranging from 50° at Scilly to 32° at Aberdeen. Rising briskly later, and maxima between 45° and 55°.

Wind varying between S.W. and S.E. over the whole of western Europe. Fresh or strong on the western coasts, light in the E. Increasing in force later and reaching a gale in N. Ireland.

Sea rough in the S.W., W., and N.

Barometer falling over the whole of our area, the change being as much as half an inch at Stornoway. Readings highest in the E. of France and lowest off our N.W. coasts. Mercury falling quickly in N.W. in evening and depression appearing there.



Wednesday, November 24.

Weather fine in the S.W. of France and over the Straits of Dover, cloudy or dull elsewhere, with rain at our more southern stations. Weather cloudy, with some showers during day but clearing except in Ireland at night.

Temperature risen generally, the change in E. England amounting to between 10° and 15°. Thermometer high all day and maxima between 50° and 55° except in the N.

Wind south-westerly over the whole of France and these Islands, and southerly to south-easterly over the countries to the eastward of the North Sea. Little change during day but wind increasing in force and reaching a fresh gale in S. Ireland.

Sea rough except in the S.E., N.E., and off Valentia.

Barometer rising a little in S. Ireland as well as over France, N. Germany, and Denmark, falling elsewhere. Highest pressures still shown over the S.E. of France, and the lowest off the N.W. of Scotland. Barometer falling quickly at Valentia later and fall spreading.

Thursday, November 25.

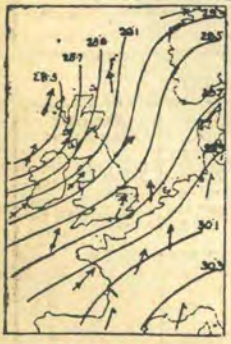
Weather fine in the N.W. of France, a large part of Great Britain, and the E. of Ireland, but cloudy and rainy elsewhere. Sky nearly clear at all except the Irish stations in the evening.

Temperature risen somewhat except in the N.W. and N.; readings ranging from 55° in the S. to 48° in the N. Maxima between 50° and 57° except in N. Scotland.

Wind drawing from W. on our western coasts, into S.W. on our E. coasts, and into S. over the countries to the eastward of the North Sea. Strong to a gale in force, except in N.E. Wind backing to S. at Valentia at 6 p.m.

Sea very rough except off our E. coast.

Barometer falling over the whole of western Europe and deep depression shown to the northward of Scotland, but recovery taking place generally during day. Sharp fall at Valentia again at night.



Friday, November 26.

Weather squally, wet, and unsettled, except in the S.W. of France and over N. Germany. Showery all day at most stations, but sky clearing almost everywhere in the evening.

Temperature risen a few degrees generally, and readings ranging from 56° over central England to 44° at Nairn. Maxima between 50° and 55° generally.

Wind blowing from S.W. over France, England, and Ireland, and from S. in Scotland and the S. of Norway. Reaching the force of a gale in most parts of the country, and blowing with great force in the N.W. and N. Very heavy gales reported in the N. all day.

Sea exceedingly rough, except in the N.E.

Barometer falling, except on the eastern shores of the North Sea, and very deep depression shown in N.W. Disturbance passing N.E., and barometer falling to 28·2 ins. at Stornoway, while rising quickly over Ireland.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, November 27.

Weather fine over nearly the whole of these Islands and the N. of France, but showers reported from N. Ireland, and overcast skies from the greater part of the continent. Fine all day generally, but showery in the W.

Temperature risen over Scandinavia, fallen elsewhere. Readings uniform, ranging from 51° at Scilly to 41° at Wick. Maxima between 50° and 55° generally.

Wind westerly generally, but drawing into S.W. over Scandinavia; fresh in force on nearly all coasts, and reaching a gale in the N. Wind backing to S.W. in W. Ireland later.

Sea rough on all our S.W., W., and N. coasts.

Barometer fallen over Norway and Sweden, risen fast elsewhere. Readings highest over France, and lowest off the W. of Norway. Mercury rising all day in most districts, but fresh fall commencing in W. Ireland at night.

Sunday, November 28.

Weather fine over N. France, the S.E. of England, N. Germany, and the S. of Scandinavia, cloudy in most other places, with fog in France and rain in N. Scotland. Rain falling in W. I later, but weather fine all day in S.E.

Temperat en generally and high over the whole country, rangi m 55° at Valentia to 42° at Yarmouth. Slight fall encing in W. later, but maxima between 50° and 5

Wind sout -easterly over France, southerly and south-westerly over the whole of these Islands and Scandinavia; blowing a gale in the W. and N., and strong except in the S.E. and over France. South-westerly and southerly winds all day, and gales holding in N. and W.

Sea very rough in N. and W.

Barometer falling slightly in Ireland and Scotland, rising quickly over the Continent and England and Scotland. Anticyclone formed over France, with low pressures off the N.W. of Scotland. Scarcely any change occurring during day.

Monday, November 29.

Weather fine in the E. and S.E., cloudy elsewhere, with rain at some western stations and hail at Wick. Weather fine except in W. all day, slight rain in W. and N.

Temperature fallen in W. and N., changed little elsewhere. Readings ranging from 52° in the S.W. to 39° at Aberdeen, and maxima between 50° and 55° except in N.

Wind easterly over France, southerly and south-westerly over Ireland and England, and westerly in Scotland, moderate generally, but blowing a gale in N. Scotland. Moderate to fresh south-westerly to westerly winds all day.

Sea rough in extreme N. and S.W.

Barometer rising except over France, Denmark, and Sweden. Anticyclone still lying over France, with low pressures over the N. of Scandinavia. Barometer rising slowly all day.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	49	38	44·7	+3·7	7	0·83	+0·17	*	*
	Stornoway	52	36	44·4	+2·9	7	1·81	+0·77	5	10
	Wick	53	35	43·3	+2·3	6	0·39	−0·39	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	56	41	51·4	+4·1	5	0·77	−0·13	*	*
	Jersey (Noirmont)	56	32	47·6	+0·7	4	0·79	+0·08	18	30

The above observations made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

ynoptic Weather Charts.—8 a.m.

ROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, November 27.

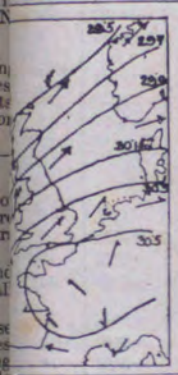
Weather fine over nearly the whole of these Islands and the N. of France, but showers reported from N. Ireland, and overcast skies from the greater part of the continent. Fine all day generally, but showery in the W.

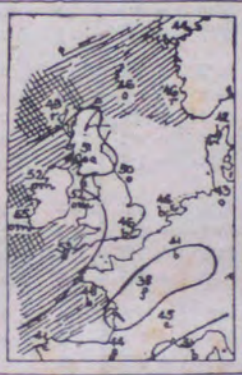
Temperature risen over Scandinavia, fallen elsewhere. Readings uniform, ranging from 51° at Scilly to 41° at Wick. Maxima between 50° and 55° generally.

Wind westerly generally, but drawing into S.W. over Scandinavia; fresh in force on nearly all coasts, and reaching a gale in the N. Wind backing to S.W. in W. Ireland later.

Sea rough on all our S.W., W., and N. coasts.

Barometer fallen over Norway and Sweden, risen fast elsewhere. Readings highest over France, and lowest off the W. of Norway. Mercury rising all day in most districts, but fresh fall commencing in W. Ireland at night.





Sunday, November 28.

Weather fine over N. France, the S.E. of England, N. Germany, and the S. of Scandinavia, cloudy in most other places, with fog in S. France and rain in N. Scotland. Rain falling in W. Ireland later, but weather fine all day in S.E.

Temperature risen generally and high over the whole country, ranging from 55° at Valentia to 42° at Yarmouth. Slight fall commencing in W. later, but maxima between 50° and 55°.

Wind south-easterly over France, southerly and south-westerly over the whole of these Islands and Scandinavia; blowing a gale in the W. and N., and strong except in the S.E. and over France. South-westerly and southerly winds all day, and gales holding in N. and W.

Sea very rough in N. and W.

Barometer falling slightly in Ireland and Scotland, rising quickly over the Continent and England and Scotland. Anticyclone formed over France, with low pressures off the N.W. of Scotland. Scarcely any change occurring during day.

Monday, November 29.

Weather fine in the E. and S.E., cloudy elsewhere, with rain at some western stations and hail at Wick. Weather fine except in W. all day, slight rain in W. and N.

Temperature fallen in W. and N., changed little elsewhere. Readings ranging from 52° in the S.W. to 39° at Aberdeen, and maxima between 50° and 55° except in N.

Wind easterly over France, southerly and south-westerly over Ireland and England, and westerly in Scotland, moderate generally, but blowing a gale in N. Scotland. Moderate to fresh south-westerly to westerly winds all day.

Sea rough in extreme N. and S.W.

Barometer rising except over France, Denmark, and Sweden. Anticyclone still lying over France, with low pressures over the N. of Scandinavia. Barometer rising slowly all day.

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VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
AND, N.	Sumburgh Head	49	38	44·7	+3·7	7	0·83	+0·17	•	•
	Stornoway	52	36	44·4	+2·9	7	1·81	+0·77	5	10
	Wick	53	35	43·3	+2·3	6	0·39	−0·39	•	•
NEL NDS	Scilly (St. Mary's)	56	41	51·4	+4·1	5	0·77	−0·13	•	•
	Jersey (Noirmont)	56	32	47·6	+0·7	4	0·79	+0·08	18	30

Above observations made in Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	54	? 20	42·7	+ 2·9	? 6	? 0·93	? +0·43	*	*
	Aberdeen	54	29	42·9	+ 2·9	4	0·27	−0·43	13	26
	Glenalmond	50	12	39·3	− 0·2	0	—	?	3	6
	Leith	57	21	44·5	+ 4·8	5	0·24	−0·19	*	*
2. ENGLAND, N.E.	Shields	53	23	45·1	+ 4·3	4	0·22	−0·48	*	*
	Durham	53	18	43·9	+ 2·1	3	0·35	−0·37	11	21
	York	57	26	45·2	+ 4·4	4	0·47	−0·09	7	13
	Spurn Head	55	29	45·5	+ 4·3	4	0·10	?	*	*
	Kelstern (Lincolnsh.) ℳ	54	23	42·6	+ 1·5	4	0·22	−0·23	10	18
3. ENGLAND, E.	Hillington ℳ	56	23	43·3	+ 1·0	4	0·23	−0·21	11	20
	Yarmouth	56	28	44·5	+ 2·6	3	0·16	−0·63	*	*
	Geldeston	57	27	45·1	+ 3·1	5	0·21	−0·38	16	28
	Cambridge	59	23	45·0	+ 3·2	4	0·14	−0·26	16	28
	Rothamsted	55	25	44·3	+ 2·3	7	0·94	+0·49	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley H[illegible])	54	22	44·8	+ 3·1	2	0·18	−0·34	*	*
	Nottingham	56	20	45·0	+ 3·7	5	0·27	−0·22	*	*
	Loughborough	56	20	45·8	+ 3·9	4	0·34	−0·05	*	*
	Leicester	58	17	45·6	+ 4·1	4	0·16	−0·33	10	18
	Birmingham (Oscott)	54	22	44·5	+ 1·6	3	0·28	−0·27	*	*
	Shrewsbury ℳ								*	*
	Churchstoke ℳ	53	25	45·8	+ 3·0	6	0·87	?	12	21
	Hereford ℳ	55	23	45·7	+ 3·2	5	0·45	−0·18	*	*
	Cirencester	54	18	43·3	+ 1·3	4	0·88	+0·28	17	30
	Oxford	56	21	46·5	+ 4·5	4	0·60	+0·20	15	26
5. ENGLAND, S.	London†	57	25	46·7	+ 4·6	4	0·47	+0·02	13	22
	Marlborough ℳ	56	27	45·1	+ 3·1	4	1·14	+0·54	*	*
	Strathfield Turgiss ℳ	56	25	45·4	+ 3·1	5	0·72	+0·26	*	*
	Dover	54	31	45·9	+ 3·7	3	0·22	−0·68	*	*
	Hastings (St. Leonard's)	54	34	47·7	+ 5·0	3	0·76	+0·15	*	*
	Southampton	56	36	47·8	+ 4·0	4	1·14	?	10	17
	Hurst Castle	55	26	48·2	+ 4·3	5	0·80	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	53	37	45·9	+ 4·1	7	4·64‡	?	*	*
	Glasgow	52	23	44·7	+ 3·2	7	1·53	+0·63	6	12
	Ardrossan	52	25	45·2	+ 4·1	7	1·41	+0·52	*	*
	Silloth (Cumberland)	54	18	45·2	+ 3·2	6	1·95	+1·35	11	21
	Douglas (Isle of Man)	53	37	48·1	+ 5·3	5	1·55	+0·55	12	22
7. ENGLAND, N.W.	Barrow-in-Furness	52	? 27	44·9	+ 2·9	6	1·88	?	*	*
	Stonyhurst	52	25	44·1	+ 1·5	6	1·79	+0·68	12	22
	Blackpool ℳ	52	23	44·6	+ 2·1	6	2·01	+1·31	*	*
	Manchester	58	26	46·2	+ 5·0	3	0·75	−0·04	*	*
	Liverpool Obs[illegible] (Bidston)	54	? 22	46·4	+ 4·4	5	0·57	+0·09	*	*
	Llandudno ℳ	59	33	49·6	+ 5·7	5	0·91	?	15	27
	Holyhead	53	30	47·0	+ 3·0	5	2·04	+1·34	*	*
8. ENGLAND, S.W.	Pembroke	53	36	48·8	+ 3·5	7	1·28	+0·39	20	35
	Barnstaple	57	31	48·4	+ 3·9	5	0·78	−0·04	*	*
	Falmouth	56	43	50·2	+ 3·8	4	1·66	+0·51	20	34
	Plymouth	56	30	49·8	+ 3·8	5	1·38	+0·58	*	*
	Prawle Point	55	35	49·3	+ 3·5	4	0·82	?	*	*
9. IRELAND, N.	Londonderry	53	33	44·9	+ 2·0	7	1·53	+0·72	*	*
	Mullaghmore	54	35	45·9	+ 3·4	7	1·56	?	*	*
	Markree Castle	53	33	44·8	+ 2·1	7	1·01	+0·26	13	23
	Brookeborough	52	34	44·5	+ 1·8	6	1·17	?	*	*
	Armagh	53	36	45·8	+ 2·8	6	0·94	+0·34	16	29
	Donaghadee	53	37	45·9	+ 3·0	5	0·59	?	*	*
10. IRELAND, S.	Dublin	57	39	49·1	+ 5·7	6	0·64	+0·04	22	39
	Parsonstown	54	34	45·5	+ 2·5	7	1·12	+0·51	15	27
	Waterford	54	35	48·2	+ 4·2	6	1·28	?	*	*
	Roche's Point	55	41	48·2	+ 4·3	6	2·32	+1·13	*	*
	Valentia	57	41	49·5	+ 5·4	7	2·10	+0·92	12	21
	Foynes	55	39	47·2	+ 3·7	7	1·45	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.
† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory.
‡ The amount of rainfall at Laudale being exceptionally heavy it has not been used in obtaining the rainfall value given for "Scotland, W." on page 1.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible duration
		°F	°F	°F	°F		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	54	? 20	42·7	+ 2·0	? 6	? 0·93	? +0·43	*	*
	Aberdeen	54	29	42·9	+ 2·9	4	0·27	−0·43	13	26
	Glenalmond	50	12	39·3	− 0·2	0	—	?	3	6
	Leith	57	21	44·5	+ 4·8	5	0·24	−0·19	*	*
2. ENGLAND, N.E.	Shields	53	23	45·1	+ 4·3	4	0·22	−0·48	*	*
	Durham	53	18	43·9	+ 2·1	3	0·35	−0·37	11	21
	York	57	26	45·2	+ 4·4	4	0·47	−0·09	7	13
	Spurn Head	55	29	45·5	+ 4·3	4	0·10	?	*	*
	Kelstern (Lincolnsh.) ℳ	54	23	42·6	+ 1·5	4	0·22	−0·23	10	18
3. ENGLAND, E.	Hillington ℳ	56	23	43·3	+ 1·0	4	0·23	−0·21	11	20
	Yarmouth	56	28	44·5	+ 2·6	3	0·16	−0·63	*	*
	Geldeston	57	27	45·1	+ 3·1	5	0·21	−0·38	16	28
	Cambridge	59	23	45·0	+ 3·2	4	0·14	−0·26	16	28
	Rothamsted	55	25	44·3	+ 2·3	7	0·94	+0·49	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	54	22	44·8	+ 3·1	2	0·18	−0·34	*	*
	Nottingham	56	20	45·0	+ 3·7	5	0·27	−0·22	*	*
	Loughborough	56	20	45·8	+ 3·9	4	0·34	−0·05	*	*
	Leicester	58	17	45·6	+ 4·1	4	0·16	−0·33	10	18
	Birmingham (Oscott)	54	22	44·5	+ 1·6	3	0·28	−0·27	*	*
	Shrewsbury ℳ								*	*
	Churchstoke ℳ	53	25	45·8	+ 3·0	6	0·87	?	12	21
	Hereford ℳ	55	23	45·7	+ 3·2	5	0·45	−0·18	*	*
	Cirencester	54	18	43·3	+ 1·3	4	0·88	+0·28	17	30
	Oxford	56	21	46·5	+ 4·5	4	0·60	+0·20	15	26
5. ENGLAND, S.	London†	57	25	46·7	+ 4·6	4	0·47	+0·02	13	22
	Marlborough ℳ	56	27	45·1	+ 3·1	4	1·14	+0·54	*	*
	Strathfield Turgiss ℳ	56	25	45·4	+ 3·1	5	0·72	+0·26	*	*
	Dover	54	31	45·9	+ 3·7	3	0·22	−0·68	*	*
	Hastings (St. Leonard's)	54	34	47·7	+ 5·0	3	0·76	+0·15	*	*
	Southampton	56	36	47·8	+ 4·0	4	1·14	?	10	17
	Hurst Castle	55	26	48·2	+ 4·3	5	0·80	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	53	37	45·9	+ 4·1	7	4·64‡	?	*	*
	Glasgow	52	23	44·7	+ 3·2	7	1·53	+0·63	6	12
	Ardrossan	52	25	45·2	+ 4·1	7	1·41	+0·52	*	*
	Silloth (Cumberland)	54	18	45·2	+ 3·2	6	1·95	+1·35	11	21
	Douglas (Isle of Man)	53	37	48·1	+ 5·3	5	1·55	+0·55	12	22
7. ENGLAND, N.W.	Barrow-in-Furness	52	? 27	44·9	+ 2·9	6	1·88	?	*	*
	Stonyhurst	52	25	44·1	+ 1·5	6	1·79	+0·68	12	22
	Blackpool ℳ	52	23	44·6	+ 2·1	6	2·01	+1·31	*	*
	Manchester	58	26	46·2	+ 5·0	3	0·75	−0·04	*	*
	Liverpool Obsy (Bidston)	54	? 22	46·4	+ 4·4	5	0·57	+0·09	*	*
	Llandudno ℳ	59	33	49·6	+ 5·7	5	0·91	?	15	27
	Holyhead	53	30	47·0	+ 3·0	5	2·04	+1·34	*	*
8. ENGLAND, S.W.	Pembroke	53	36	48·8	+ 3·5	7	1·28	+0·39	20	35
	Barnstaple	57	31	48·4	+ 3·9	5	0·78	−0·04	*	*
	Falmouth	56	43	50·2	+ 3·8	4	1·66	+0·51	20	34
	Plymouth	56	30	49·8	+ 3·8	5	1·38	+0·58	*	*
	Prawle Point	55	35	49·3	+ 3·5	4	0·82	?	*	*
9. IRELAND, N.	Londonderry	53	33	44·9	+ 2·0	7	1·53	+0·72	*	*
	Mullaghmore	54	35	45·9	+ 3·4	7	1·56	?	*	*
	Markree Castle	53	33	44·8	+ 2·1	7	1·01	+0·26	13	23
	Brookeborough	52	34	44·5	+ 1·8	6	1·17	?	*	*
	Armagh	53	36	45·8	+ 2·8	6	0·94	+0·34	16	29
	Donaghadee	53	37	45·9	+ 3·0	5	0·59	?	*	*
10. IRELAND, S.	Dublin	57	39	49·1	+ 5·7	6	0·64	+0·04	22	39
	Parsonstown	54	34	45·5	+ 2·5	7	1·12	+0·51	15	27
	Waterford	54	35	48·2	+ 4·2	6	1·28	?	*	*
	Roche's Point	55	41	48·2	+ 4·3	6	2·32	+1·13	*	*
	Valentia	57	41	49·5	+ 5·4	7	2·10	+0·92	12	21
	Foynes	55	39	47·2	+ 3·7	7	1·45	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.
† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory.
‡ The amount of rainfall at Laudale being exceptionally heavy it has not been used in obtaining the rainfall value given for "Scotland, W." on page 1.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE, LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 49.] WEEK ENDING MONDAY, DECEMBER 6, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Geldeston, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Waterford, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainf for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	56	30	44	5 above.	5	7	1 more.	8	17
	2. ENGLAND, N.E.	56	28	44	3 above.	4	2	5 less.	10	19
	3. ENGLAND, E.	56	25	43	2 above.	3	1	5 less.	12	22
	4. MID. COUNTIES	57	26	44	3 above.	4	2	4 less.	11	20
	5. ENGLAND, S.	54	28	45	3 above.	1	less than ½	6 less.	6	10
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	56	32	45	4 above.	7	11	1 more.	4	8
	7. ENGLAND, N.W.	54	23	46	4 above.	5	6	2 less.	9	16
	8. ENGLAND, S.W.	54	33	49	3 above.	2	2	8 less.	3	6
	9. IRELAND, N.	56	25	46	3 above.	7	5	2 less.	11	21
	10. IRELAND, S.	56	30	48	5 above.	5	4	5 less.	10	19

General Remarks.

Weather has been very cloudy or gloomy, but still very mild in all parts of the Kingdom. Very little rain has fallen except in Scotland.

Temperature was again above the mean in all districts, the excess being as much as 5° in "Ireland, S." and "Scotland, E." The maxima were generally rather high, ranging in most districts between 55° and 57°. The thermometer was lowest on the 2nd and 3rd, when it went down to 23° at Manchester and to 25° at Cambridge and Markree Castle.

Rainfall was slightly more than the mean in Scotland, but considerably less in most of the English and Irish districts.

Bright sunshine has been very scarce in all places. The percentage of total possible duration was greatest (22) in "England, E.," and least (6) in "England, S.W."

Wind blew from the southward generally—with moderate force at most stations, but freshly at times in the W. and N., where it increased to a slight gale on November 30th and December 5th.

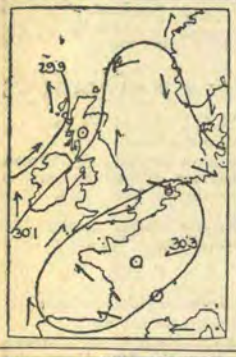
Q 3932. 100.—12/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending December 6, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.



Tuesday, November 30.

Weather dull over nearly the whole of western Europe, with rain in the N.W. and N.E., and thunder at Christiansund. Dull all day except over central England with rain in the N.

Temperature fallen except in the W., and readings ranging from 53° at Valentia to 40° at Aberdeen and 38° at Cambridge. Thermometer inclined downward during day and maxima between 45° and 55°.

Wind easterly over France, southerly on nearly all our coasts, and westerly in the Shetlands and on the eastern shores of the North Sea. Light in the E., strong over the Bay of Biscay, our W. and N. coasts, and blowing a gale in Scandinavia. Little change later.

Sea rough in the S.W., W., and N.

Barometer falling in the W. and S.W. and over Sweden, rising elsewhere. Area of high pressure over France, with low pressures off the W. of Ireland, and a large disturbance in the N. of Scandinavia. Mercury falling all day and small disturbance appearing in N.W.

Wednesday, December 1.

Weather fine on our S. coast and locally in a few other places, but sky generally overcast, with rain in Ireland and Norway and fog over France. Weather clearing in W. later, but becoming unsettled in S.

Temperature risen over these Islands and W. France, fallen elsewhere; readings ranging from 50° in the S.W. to 41° at Wick. Maxima between 50° and 53° generally, but below 50° in the W. and N.

Wind veered to N.W. on our extreme W. coasts, but still south-westerly generally; moderate to fresh in force. Wind veering during day and northerly to westerly breezes prevailing generally.

Sea rough in the S.W. and N.

Barometer rising in N. Scandinavia, fallen briskly elsewhere. Large shallow depression shown in N., with small subsidiary disturbances on our western coasts. Recovery commencing in W. later.

Thursday, December 2.

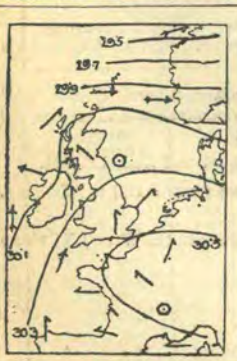
Weather fine over a considerable portion of these Islands and in S. France, more or less cloudy elsewhere, with rain in the S.W. and fog over France. Fine in the E. and dull in the W. during day, dense fog in London.

Temperature risen several degrees in the S., fallen elsewhere; readings ranging from 50° at Scilly to 32° at Nottingham and Parsonstown. Maxima between 50° and 55° in the S.W., between 40° and 50° elsewhere.

Wind north-westerly over the North Sea, light on our coasts, strong to a gale on the other side; light or moderate south-easterly and southerly winds reported from France and other parts of these Islands. Little change later.

Sea rough near the Shetlands and the Skaw.

Barometer risen over nearly the whole of western Europe, fallen in Scandinavia. Large area of high and uniform pressure lying over these Islands and France, with large depression over S. Sweden. Mercury rising all day, except in Ireland.



Friday, December 3.

Weather cloudy or dull, except to the eastward of the North Sea, fog reported over central England, and rain in W. Ireland. Cloudy and damp all day, but sky clearing considerably in evening.

Temperature fallen over Norway, Sweden, and Denmark, risen elsewhere,—quickly in Ireland. Maxima varying from 45° in the N. to 55° in the south-west; high for season.

Wind easterly over France, southerly and south-westerly over the United Kingdom, and variable elsewhere. Strong in the W. of Ireland, moderate elsewhere. Wind veering to S.W. and W. during day, and increasing somewhat.

Sea rough round the S. of Ireland.

Barometer rising over the eastern half of our area, falling over the western. Large anticyclone still shown over France and our S. coast, with shallow depression off the W. of Scotland. Disturbance passing eastward later, and mercury falling in E. and recovering in W.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, December 4.

Weather rainy and foggy over the central parts of England, and cloudy or dull in nearly all parts of western Europe. Cloudy skies reported all day, except on the extreme S.E. coast of England.

Temperature fallen over Scandinavia, risen elsewhere. Readings ranging from 52° at Scilly to 36° at Aberdeen. Maxima between 50° and 55°, except on our N.E. coast, where they were below 50°.

Wind easterly over France, southerly over Ireland, westerly over Great Britain, and south-easterly over Denmark and Norway. Moderate or light in force in nearly all places. Strong south-easterly wind reported from Valentia later.

Sea rough round Scilly and to the north-eastward of Scotland.

Barometer risen in all places,—most in Sweden and our N.W. coasts. Slight decrease commencing in the W. later. Anticyclone holding firmly over France.

Sunday, December 5.

Weather fine in some parts of the S.E. of England, but dull or cloudy in nearly all other places, with rain in N. Ireland. Slight rain falling except in the S., and weather cloudy generally.

Temperature fallen over central England, risen several degrees elsewhere. Readings ranging from 54° at Valentia to 42° at Nottingham. Maxima uniform between 50° and 55°.

Wind southerly on our extreme western coasts, south-westerly to westerly in our other districts, and easterly over France. Blowing freshly or strongly in the W. and S.W., but lightly or moderately elsewhere. Fresh southerly and south-westerly winds in the W. all day.

Sea rough in the W. and N.

Barometer risen over France and our southern stations, fallen elsewhere. Large area of high readings shown in the S. with comparatively low pressures to the northward of Scotland. Pressure giving way except in the S. and W. during the day.

Monday, December 6.

Weather fine at a very few of our inland stations, cloudy or dull generally with rain in the N.W. Sky clearing on our extreme northern and south-eastern coasts in the evening but cloudy generally all day.

Temperature risen except in the S.W. of France and the S. of Norway. Readings ranging from 55° at Shields and 53° at Valentia to 48° at Yarmouth and 38° at Biarritz. Maxima between 50° and 55° generally, but reaching 57° at Nottingham.

Wind southerly or south-westerly at our most western stations but westerly on most of our other coasts. Moderate or light except in the W. Little change during the day but wind in W. falling to a moderate breeze.

Sea rough in the W., S.W., and N.

Barometer falling quickly in Norway and slightly on both shores of the North Sea, rising slightly elsewhere. Anticyclone lying over France with large depression near Bodö. Pressure increasing over the whole of these Islands all day.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	50	35	43·0	+1·9	6	1·70	+1·00	*	*
	Stornoway	54	33	43·6	+2·1	6	0·99	−0·15	6	13
	Wick	54	30	42·9	+2·3	6	1·45	+0·70	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	56	47	51·7	+4·7	3	0·38	−0·52	*	*
	Jersey (Noirmont)	52	38	47·4	+2·2	3	0·07	−0·63	1	2

* The above observations made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.	*	*
1. SCOTLAND, E.	Nairn	55	36	44·4	+ 4·5	5	0·68	+0·19		
	Aberdeen	55	32	42·5	+ 3·0	6	0·59	−0·11	8	17
	Glenalmond	51	30	43·4	+ 4·2	4	0·65	?	8	16
	Leith	56	34	46·2	+ 6·7	6	0·68	+0·27	*	*
2. ENGLAND, N.E.	Shields	56	35	45·6	+ 5·6	5	0·19	−0·50	*	*
	Durham	53	32	44·5	+ 3·5	4	0·14	−0·62	6	12
	York	54	32	44·0	+ 3·5	5	0·15	−0·45	9	17
	Spurn Head	52	37	43·9	+ 3·2	3	0·08	?	*	*
	Kelstern (Lincolnsh.) ℳ	55	28	42·0	+ 1·4	4	0·18	−0·23	15	28
3. ENGLAND, E.	Hillington ℳ	53	27	43·0	+ 1·5	6	0·24	−0·45	11	20
	Yarmouth	51	27	42·0	+ 0·8	2	0·03	−0·77	*	*
	Geldeston	52	28	43·2	+ 1·6	3	0·06	−0·52	11	20
	Cambridge	55	25	42·9	+ 1·9	3	0·09	−0·36	15	27
	Rothamsted	56	28	44·4	+ 2·9	2	0·08	−0·40	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	57	30	43·9	+ 2·6	2	0·09	−0·46	*	*
	Nottingham	57	31	44·0	+ 2·9	6	0·35	−0·15	*	*
	Loughborough	57	27	45·0	+ 3·5	6	0·25	−0·25	*	*
	Leicester	54	26	43·9	+ 2·9	6	0·37	−0·12	7	13
	Birmingham (Oscott)	55	30	44·2	+ 2·6	5	0·23	−0·37	*	*
	Shrewsbury ℳ	54	26	43·9	+ 1·9	3	0·21	−0·29	*	*
	Churchstoke ℳ	54	30	45·6	+ 2·8	2	0·02	?	14	26
	Hereford ℳ	56	29	44·6	+ 2·4	1	0·01	−0·64	*	*
	Cirencester	53	30	42·5	+ 0·5	3	0·09	−0·53	13	24
	Oxford	53	29	44·7	+ 2·8	1	0·01	−0·39	8	15
5. ENGLAND, S.	London†	53	28	44·0	+ 2·4	1	0·04	−0·41	5	9
	Marlborough ℳ	51	32	44·5	+ 3·0	2	0·03	−0·62	*	*
	Strathfield Turgiss ℳ	54	28	43·9	+ 1·9	1	0·02	−0·44	*	*
	Dover	52	35	45·8	+ 4·3	1	0·03	−0·86	*	*
	Hastings (St. Leonard's)	51	39	46·3	+ 4·3	2	0·10	−0·50	*	*
	Southampton	55	36	46·0	+ 2·5	1	1·01	?	6	11
	Hurst Castle	52	38	46·8	+ 3·3	2	0·05	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	56	36	45·6	+ 4·2	5	1·49	?	*	*
	Glasgow	53	38	45·2	+ 4·2	7	1·22	+0·27	4	8
	Ardrossan	54	32	49·0	+ 5·0	7	1·25	+0·36	*	*
	Silloth (Cumberland)	52	32	44·6	+ 3·1	7	0·81	+0·20	3	6
	Douglas (Isle of Man)	52	33	45·6	+ 3·1	7	0·63	+0·39	6	11
7. ENGLAND, N.W.	Barrow-in-Furness	50	37	45·5	+ 4·0	7	1·23	?	*	*
	Stonyhurst	50	33	43·9	+ 2·1	6	1·44	+0·33	5	19
	Blackpool ℳ	50	31	44·8	+ 2·6	5	0·29	−0·42	*	*
	Manchester	53	23	42·1	+ 1·0	2	0·17	−0·62	*	*
	Liverpool Obsy (Bidston)	53	36	47·3	+ 5·3	4	0·20	−0·25	*	*
	Llandudno ℳ	54	37	48·5	+ 5·6	4	0·40	?	12	22
	Holyhead	52	39	48·4	+ 4·6	4	0·65	−0·11	*	*
8. ENGLAND, S.W.	Pembroke	53	39	49·4	+ 4·4	2	0·15	−0·74	2	4
	Barnstaple	54	33	47·0	+ 3·0	1	0·07	−0·78	*	*
	Falmouth	54	43	50·1	+ 4·1	2	0·20	−0·89	4	7
	Plymouth	55	38	48·0	+ 2·2	2	0·07	−0·73	*	*
	Prawle Point	54	39	48·5	+ 3·0	3	0·27	?	*	*
9. IRELAND, N.	Londonderry	55	35	45·5	+ 3·0	7	0·58	−0·24	*	*
	Mullaghmore	56	33	47·5	+ 5·3	7	0·84	?	*	*
	Markree Castle	55	25	44·0	+ 1·5	7	0·50	−0·23	10	19
	Brookeborough	54	27	43·8	+ 1·5	7	0·56	?	*	*
	Armagh	54	37	46·3	+ 3·6	7	0·39	−0·22	12	23
	Donaghadee	54	33	45·6	+ 3·1	6	0·32	?	*	*
10. IRELAND, S.	Dublin	56	34	48·3	+ 5·3	5	0·22	−0·35	13	24
	Parsonstown	55	30	46·4	+ 3·4	6	0·37	−0·25	13	24
	Waterford	52	30	47·9	+ 4·3	6	0·29	?	*	*
	Roche's Point	56	38	50·1	+ 6·5	3	0·40	−0·80	*	*
	Valentia	55	36	50·3	+ 6·4	5	0·49	−0·75	5	9
	Foynes	55	30	46·8	+ 3·5	6	0·81	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.
† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 50.] WEEK ENDING MONDAY, DECEMBER 13, 1880. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Geldeston, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Waterford, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E. -	55	29	44	5 above.	4	2	2 less.	11	24
	2. ENGLAND, N.E.	55	33	46	6 above.	2	2	4 less.	6	12
	3. ENGLAND, E. -	55	33	45	5 above.	2	2	5 less.	10	18
	4. MID. COUNTIES	55	28	47	6 above.	1	1	4 less.	12	18
	5. ENGLAND, S. -	58	32	47	5 above.	1	1	5 less.	7	13
Principal Grazing, &c. Districts.	6. SCOTLAND, W. -	55	30	47	5 above.	5	9	3 less.	4	9
	7. ENGLAND, N.W.	58	36	48	5 above.	4	8	1 less.	6	11
	8. ENGLAND, S.W.	55	40	50	5 above.	2	1	8 less.	4	7
	9. IRELAND, N. -	54	39	48	5 above.	5	6	1 less.	4	8
	10. IRELAND, S. -	56	35	49	6 above.	3	2	7 less.	7	13

General Remarks.

Weather has again been very dull, but mild and dry, in all places. Towards the close of the period, however, it was becoming much less settled and a little rain fell at nearly all stations.

Temperature continued above the mean in all districts, the excess being 5° or 6° in all parts of the country. The highest reading recorded occurred at Manchester and Marlborough, where the thermometer rose to 58°. The lowest of the minima were registered on the 11th, when temperature fell to a little below freezing point at some of the inland English stations; but at Glenalmond the minimum reading was recorded on the 7th, and at Laudale on the 13th.

Rainfall was less than the mean everywhere—especially over our south-western districts.

Bright sunshine shows a slight decrease in prevalence over most districts, the percentage of total possible duration varying from 24 in "Scotland, E." and 18 in "England, E." and the "Midland Counties," to 9 in "Scotland, W.," 8 in "Ireland, N.," and 7 in "England, S.W."

Wind on the 7th was very variable over our southern counties and fresh or strong from S.W. elsewhere, but during the remainder of the period westerly or north-westerly winds prevailed in all parts of the Kingdom, blowing freshly generally and occasionally increasing to a strong gale on our extreme north-western and northern coasts.

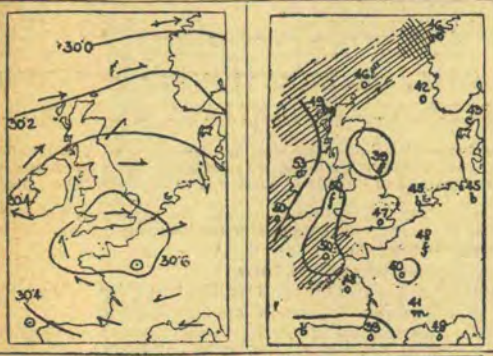
Q 4007. 100.—12/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending December 13, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.



Tuesday, December 7.

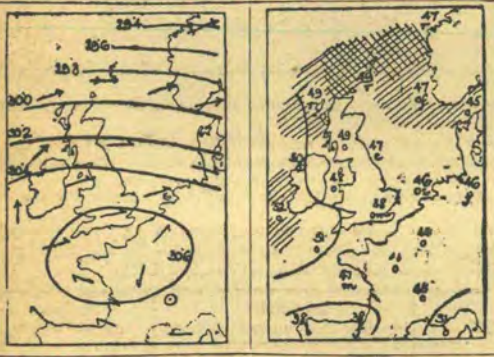
Weather fine in the E. of Scotland, cloudy or dull elsewhere, with fog on the E. coast of England. Cloudy or dull, but dry weather prevailing all day.

Temperature fallen generally, briskly in the E.; readings ranging from 53° in N. Ireland, to 39° at Shields. Rising except in the S.E. during the day, and maxima uniform between 50° and 55°.

Wind easterly over France, southerly on our S.W. coasts, south-westerly to westerly on our other coasts and over the North Sea, and north-westerly in the Netherlands. Moderate to fresh in force, and increasing to a slight gale in the N. in the evening.

Sea rough in the S.W., N.W., and N.

Barometer falling in the N. of Scotland and S.W. of France, rising elsewhere. Large anticyclone lying over the S. of England and N. of France. Fall of the mercury in the N., spreading southward over us during the day.



Wednesday, December 8.

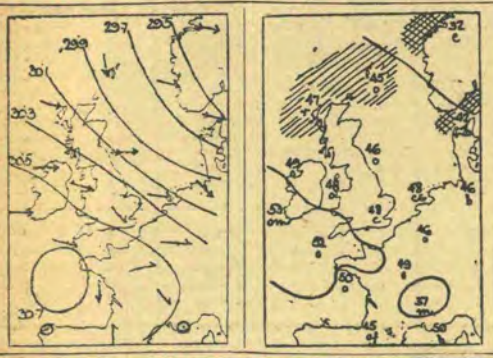
Weather fine in the N.E. of Scotland, cloudy or dull in all other parts of western Europe. Rain falling in the Hebrides and W. of Norway. Dull weather prevailing all day, with rain in the W.

Temperature risen in nearly all places, quickly in the N.E. Readings ranging from 52° at Valentia, and 50° at Wick, to 41° at Spurn Head. Maxima again uniform between 50° and 55°.

Wind still easterly over France, and westerly over the whole of these Islands and the countries to the eastward of the North Sea. Blowing a gale in N. Scotland and over Norway. Little change during day; gale holding in N.

Sea very rough in the N.

Barometer falling in almost all places,—very quickly in Norway. Large depression shown in the extreme N., but anticyclone still lying over southern England and N. France. Mercury falling all day, except in S.W.



Thursday, December 9.

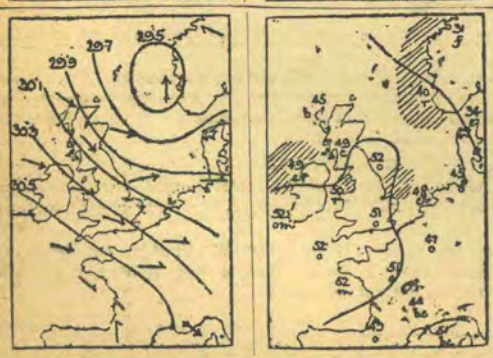
Weather fine in some parts of the N. and E. of England, but cloudy or dull in nearly all other places, with rain in N. Scotland. No change during day but rainfall in N. very slight.

Temperature fallen except on the S. coast of England and over the W. and N. of France. Readings ranging from 53° at Valentia to 45° in the Shetlands. Maxima between 50° and 55°.

Wind north-westerly to westerly over these Islands, north-westerly to northerly over France, and westerly to south-westerly over Scandinavia, strong to a gale on our northern coasts and over the North Sea. Little change later, but wind backing towards S.W. in the N.W.

Sea rough in the N. and very rough on some parts of the Norwegian coasts.

Barometer rising in the N. and W. of these Islands and in W. France, falling elsewhere. Area of high pressure (30·7 ins.) over the Bay of Biscay with large area of low pressure in the N. of Scandinavia. Mercury falling during day at all our stations.



Friday, December 10.

Weather fine in Scotland and the E. of England, but dull in most other places. Rain and snow falling in W. Norway. Weather moderately fine all day over a large part of the Kingdom.

Temperature fallen except in Scandinavia; readings ranging from 52° in the S.W. to 44° at Wick. Maxima between 50° and 55° generally, but brisk fall occurring in the evening.

Wind north-westerly over these Islands and France, drawing into W. and S. on the eastern shores of the North Sea, and into E. at Christiansund. Blowing a gale in N. Scotland, and strongly except in the S.E. North-westerly winds and gales holding all day.

Sea rough in the N.W. and in the W. of Norway.

Barometer risen fast in Sweden, fallen elsewhere. Well marked depression shown in the W. of Norway, with area of high pressure over Bay of Biscay. Disturbance moving N.E. later, and recovery taking place here.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, December 11.

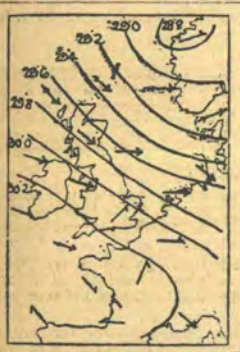
Weather fine at most of the eastern stations and over the Netherlands, cloudy or dull elsewhere, with some rain at Scilly and in W. Ireland. Weather fine all day in E. Some rain falling except in the E. and S.E.

Temperature risen over Denmark, fallen elsewhere—considerably in the S.E. Readings ranging from 50° at Scilly to 34° in London and 35° at Christiansund. Maxima between 45° and 55°.

Wind westerly to north-westerly over nearly the whole of these Islands and the North Sea, but backing to S.W. in the N. of Scotland. Fresh or strong in force except in the S.E. and over France, and reaching a gale at Cuxhaven. Strong north-westerly winds all day.

Sea rough in the N.W.

Barometer rising in the S.E. and the countries to the eastward of the North Sea, falling elsewhere. Readings highest over Bay of Biscay, lowest over Baltic. Fresh depression approaching Stornoway and passing E. over Scotland during day.



Sunday, December 12.

Weather fine over the greater part of these Islands, but cloudy at some of our extreme western stations and on the Continent generally. Rain falling at Ardrossan. Sky nearly clear all day in the E., but rain and snow falling in N.W. and N.

Temperature risen in the S.E., fallen elsewhere. Readings ranging from 52° at Scilly to 42° at Yarmouth and 40° at Wick. Slight fall in N. later: little other change.

Wind north-westerly to westerly over nearly the whole of western Europe. Blowing a hard gale at Wick and freshly or strongly except over France. W[illegible] falling lighter during day and backing to S.W. at Stornoway.

Sea very rough in the W. and N.

Barometer rising on our extreme western and northern coasts, falling elsewhere. Readings still highest in the S.W., with well marked depression near Christiansund. Rising briskly in E. during day, but fresh fall commencing in W.

Monday, December 13.

Weather fine in the N.E. and N. of these Islands, and the S. of Norway, dull and unsettled elsewhere, with rain in the N.W. Rain and snow showers in the N.W. and N. during day, but sky clear in N.E.

Temperature little changed, but inclination upward in S. and downward in N. Readings ranging from 52° in S.W., to 34° at Wick. Thermometer still rising in S. and falling in N. during day.

Wind north-westerly to westerly generally, and fresh in force in nearly all places. Very little change later.

Sea rough in the W. and N.

Barometer falling in all places except Norway and Sweden. Little change in distribution. Highest readings over Bay of Biscay, and lowest near Christiansund. Pressure increasing a little during morning, but decreasing again in the evening.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

Values for each Station in Scotland, N. and the Channel Islands.

Districts.	Names of Stations.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.	•	•
Scotland, N.	Sumburgh Head									
	Stornoway	54	33	43·5	+2·0	7	1·07	−0 21	0	0
	Wick	52	33	42·5	+2·0	5	0·80	+0·07	•	•
Channel Islands	Scilly (St. Mary's)	53	48	50·8	+3·9	5	1·16	−0·74	•	•
	Jersey (Noirmont)	54	45	48·9	+3·0	4	0·09	−0·65	2	4

The above observations made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	54	36	44·6	+ 4·5	5	0·35	−0·03	*	*
	Aberdeen	55	33	43·9	+ 4·7	3	0·20	−0·49	12	26
	Glenalmond	53	29	42·8	+ 3·6	4	0·16	?	10	21
	Leith	53	36	45·5	+ 6·0	3	0·20	−0·20	*	*
2. ENGLAND, N.E.	Shields	52	37	46·1	+ 6·5	1	0·17	−0·51	*	*
	Durham	52	33	45·5	+ 5·3	1	0·12	−0·67	9	18
	York	55	41	47·0	+ 6·9	2	0·20	−0·40	4	8
	Spurn Head	54	40	45·3	+ 5·0	2	0·34	?	*	*
	Kelstern (Lincolnsh.) ℳ	52	37	44·6	+ 4·6	2	0·28	−0·12	5	9
3. ENGLAND, E.	Hillington ℳ	53	33	45·1	+ 4·3	2	0·12	−0·57	6	11
	Yarmouth	54	36	44·3	+ 3·3	2	0·20	−0·60	*	*
	Geldeston	55	36	45·5	+ 4·5	2	0·20	−0·38	14	26
	Cambridge	55	34	46·3	+ 5·8	1	0·15	−0·34	9	17
	Rothamsted	55	34	45·8	+ 4·5	2	0·17	−0·34	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	55	28	46·6	+ 5·8	0	—	−0·56	*	*
	Nottingham	53	36	46·3	+ 5·5	3	0·20	−0·34	*	*
	Loughborough	53	38	47·2	+ 6·2	1	0·13	−0·39	*	*
	Leicester	54	36	47·0	+ 6·4	3	0·38	−0·13	7	13
	Birmingham (Oscott)	54	35	46·8	+ 5·6	1	0·12	−0·49	*	*
	Shrewsbury ℳ	55	36	47·5	+ 5·5	1	0·03	−0·46	*	*
	Churchstoke ℳ	53	35	46·6	+ 4·2	2	0·15	?	11	21
	Hereford ℳ	55	39	48·8	+ 6·7	1	0·01	−0·68	*	*
	Cirencester	54	29	44·7	+ 2·7	1	0·06	−0·62	9	17
	Oxford	55	34	46·7	+ 5·2	1	0·08	−0·32	10	19
5. ENGLAND, S.	London†	57	34	46·5	+ 5·3	1	0·12	−0·33	9	16
	Marlborough ℳ	58	32	46·7	+ 5·2	1	0·08	−0·61	*	*
	Strathfield Turgiss ℳ	55	43	47·6	+ 5·8	2	0·12	−0·37	*	*
	Dover	56	41	47·2	+ 6·1	1	0·14	−0·68	*	*
	Hastings (St. Leonard's)	56	37	46·5	+ 4·8	1	0·01	−0·60	*	*
	Southampton	55	34	47·5	+ 4·0	0	—	?	5	9
	Hurst Castle	53	36	47·6	+ 4·5	1	0·02	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	55	30	46·5	+ 5·3	7	2·27	?	*	*
	Glasgow	51	36	45·4	+ 4·6	5	0·75	−0·25	4	8
	Ardrossan	55	40	47·3	+ 6·3	5	0·87	−0·02	*	*
	Silloth (Cumberland)	52	42	46·5	+ 5·6	5	0·48	−0·17	2	4
	Douglas (Isle of Man)	54	38	47·6	+ 5·1	4	0·33	−0·72	7	14
7. ENGLAND, N.W.	Barrow-in-Furness	51	44	47·4	+ 5·3	5	0·84	?	*	*
	Stonyhurst	50	41	46·2	+ 4·6	5	1·64	+0·52	5	10
	Blackpool ℳ	50	44	47·5	+ 5·5	5	0·26	−0·47	*	*
	Manchester	58	36	46·5	+ 5·4	4	0·68	−0·08	*	*
	Liverpool Obsy (Bidston)	54	43	48·5	+ 6·5	2	0·37	−0·05	*	*
	Llandudno ℳ	54	44	48·5	+ 5·3	4	1·16	?	6	11
	Holyhead	53	44	48·7	+ 4·8	4	0·40	−0·44	*	*
8. ENGLAND, S.W.	Pembroke	52	46	49·9	+ 6·4	1	0·02	−0·87	6	11
	Barnstaple	54	46	50·1	+ 6·3	5	0·28	−0·63	*	*
	Falmouth	53	45	50·3	+ 4·3	2	0·03	−0·97	1	2
	Plymouth	55	43	49·7	+ 3·8	0	—	−0·80	*	*
	Prawle Point	53	40	48·4	+ 3·0	3	0·05	?	*	*
9. IRELAND, N.	Londonderry	53	42	47·5	+ 5·3	5	0·96	+0·11	*	*
	Mullaghmore	53	44	48·6	+ 6·6	6	1·12	?	*	*
	Markree Castle	54	39	48·2	+ 5·7	5	0·59	−0·16	3	6
	Brookeborough	53	40	47·0	+ 4·9	4	0·55	?	*	*
	Armagh	54	41	47·2	+ 4·3	5	0·24	−0·37	5	10
	Donaghadee	54	40	47·0	+ 4·7	4	0·22	?	*	*
10. IRELAND, S.	Dublin	54	43	48·6	+ 5·6	1	0·36	−0·19	7	13
	Parsonstown	53	36	47·1	+ 4·2	3	0·26	−0·41	11	21
	Waterford	56	35	48·2	+ 5·0	3	0·05	?	*	*
	Roche's Point	56	44	50·0	+ 6·3	2	0·04	−1·17	*	*
	Valentia	55	46	51·0	+ 7·5	5	0·26	−1·09	2	4
	Foynes	53	42	48·2	+ 5·1	4	0·31	?	*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.
† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 51.] WEEK ENDING MONDAY, DECEMBER 20, 1880. [*Price 2d.* [*Annual subscription, post paid, 12s. 6d.*

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Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Geldeston, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Waterford, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	**1.** SCOTLAND, E.	40	15	32	8 below.	5	?10	5 more.	14	30
	2. ENGLAND, N.E.	49	20	35	5 below.	4	5	1 less.	12	28
	3. ENGLAND, E.	52	25	39	2 below.	6	6	0 (average).	7	13
	4. MID. COUNTIES	52	19	37	4 below.	5	9	3 more.	4	7
	5. ENGLAND, S.	53	31	42	1 above.	7	21	12 more.	2	4
Principal Grazing, &c. Districts.	**6.** SCOTLAND, W.	49	16	35	6 below.	5	11	1 more.	9	17
	7. ENGLAND, N.W.	51	25	38	4 below.	4	9	2 more.	7	13
	8. ENGLAND, S.W.	54	31	46	1 above.	7	28	18 more.	8	14
	9. IRELAND, N.	50	20	37	5 below.	6	10	1 more.	18	35
	10. IRELAND, S.	55	23	41	2 below.	6	14	5 more.	15	29

General Remarks.

Weather has been very dull and unsettled in all parts of the country. Great quantities of snow have fallen in Scotland, and exceedingly heavy rain in the S. and S.W. of England.

Temperature was slightly above the mean in "England, S." and "England, S.W." but in all other districts the readings were much lower; in Scotland the deficit ranged from 6° to 8°. The thermometer was generally lowest on the 17th, when it fell to 15° at Glenalmond, 16° at Glasgow, 19° at Shrewsbury, 20° at Markree Castle and Durham, and to between 23° and 30° at all except our southern and south western stations. The maxima were generally rather low, the highest reading registered being 55° at Valentia.

Rainfall was more than the mean in all districts except "England, N.E." and "England, E."; over the S. and S.W. of England the excess was very large.

Bright sunshine shows an increase in duration except over the central, southern, and eastern parts of England, where the number of hours recorded was very small indeed. The percentage of total possible duration varied from 4 in "England, S." to 30 in "Scotland, E." and 35 in "Ireland, N."

Wind has varied greatly in direction. At the commencement of the period it was fresh from N.W. at most stations, but on the following day an easterly breeze appeared in the far N. while elsewhere a south-westerly breeze prevailed. The north-easterly current gradually gained ground and by the evening of the 16th it had reached our most southern coasts, and freshened considerably there on the 17th with much rain. During the 18th and 19th, south-westerly to westerly gales prevailed in the N. and W., and fresh breezes from the same quarter on our other coasts, but on the 20th the wind had moderated and veered to W. or N.W. at nearly all stations.

Q 4124. 100.—12/80. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending December 20, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Tuesday, December 14.

Weather fine in Scotland and parts of France, cloudy elsewhere, with rain in the S.E. and N.W. Fine all day in the N., dull and wet in the S. and W. Rain or snow reported from all places subsequently.

Temperature risen slightly over France and our S.W. coasts, fallen elsewhere. Readings ranging from 52° in the S.W. to 27° at Wick. Rather sharp frost prevailing in the N. at night.

Wind north-westerly to westerly on most of our own, the French, and N. German coasts, but a south-westerly wind reported from Valentia. Gales reported in Scotland and over the North Sea. Northerly to north-westerly winds all day except in Ireland.

Sea rough in the S.W. and W. and very rough in the N.

Barometer falling except in the N. and N.W. and in Norway. Depression shown over S. Scandinavia and fresh disturbance approaching Ireland. Pressure increasing in N. and E. all day, decreasing in W.

Wednesday, December 15.

Weather fine in N. Germany and over Baltic, cloudy or dull elsewhere, with snow at Aberdeen and rain over a large part of England. Rainy unsettled weather prevailing all day.

Temperature changes very irregular. Readings ranging from 52° at Scilly to 30° at Nairn. Thermometer high in the S. and low in the N. during day, and frost again experienced in N.

Wind westerly over France and our S. and W. coasts, southerly elsewhere, blowing strongly in the S. and S.E. Wind westerly over Ireland and England and easterly in N. Scotland; fresh in force.

Sea rough S. and S.W.

Barometer falling except in Denmark and S. Sweden. Large shallow depression shown off our N.W. coasts. Disturbance passing eastward across us later. Mercury falling all day.

Thursday, December 16.

Weather still unsettled; fine over Scotland and on the S. coast of England, more or less cloudy elsewhere. Rain falling in N.W., and snow at Stornoway. Weather fine in the E. and N. all day, dull elsewhere.

Temperature risen at our northern and eastern stations, fallen elsewhere. Readings ranging from 50° at Scilly to 33° at Aberdeen. Thermometer rather low all day, and sharp frost experienced in the northern and central districts at night.

Wind northerly over Scotland, Ireland, and the N. of England, and westerly to south-westerly over the S. of England, France, and N. Germany. Blowing freshly in the N.W. and S. Wind shifting to E. in the S.E. later, and remaining northerly elsewhere.

Sea rough in the W. and S.

Barometer rising at our northern and north-western stations, and in W. Norway, falling elsewhere. High pressures reported from Spain and W. Scotland, with small depressions over S. Wales and the North Sea. Welsh depression passing southward later, and barometer rising in N.

Friday, December 17.

Weather very fine over the northern and western parts of the Kingdom, dull and rainy in the S. and over France. Little change during day, but weather becoming more cloudy in N. and W. in evening.

Temperature fallen except in the S. of Scandinavia,—change considerable over central England. Readings ranging from 45° at Scilly to 26° at Leith. Thermometer rather low all day, sharp frost in N. at night.

Wind light from northward on most of our coasts, strong from E. in the S. of England, moderate from S. over France and from W. over Scandinavia. South-westerly wind springing up at Mullaghmore later, little other change.

Sea rough in the S. and at Spurn Head.

Barometer falling over France and Scandinavia, rising elsewhere. Depression noticed over Wales on 16th, shown over Brittany. Brisk decrease commencing in N. Ireland later, and spreading quickly over us.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, December 18.

Weather cloudy or overcast in nearly all places, rain falling at several western stations, snow at Christiansund and Cuxhaven. Cloudy unsettled weather prevailing generally, but slight clearing up occurring in the S.E. in the evening.

Temperature risen in nearly all places, readings ranging from 49° at Scilly to 30° at York. Thermometer rather low all day, but no frost at night.

Wind south-westerly and southerly on our coasts, and north-westerly in the W. of France; fresh to strong in the W. and N., but light or moderate in the S.E. Westerly and southerly gales reported over Ireland and Scotland later.

Sea rough W. and N.E.

Barometer rising over France and Scandinavia, falling elsewhere,—rapidly in the N.W.,—and deep depression shown off the W. of Scotland. Mercury falling all day, and disturbance advancing over us.

Sunday, December 19.

Weather fine in the extreme E. and S.E. of England, dull, rainy, and unsettled elsewhere. Rain and snow at Nottingham and in parts of Scotland. Very little change during day, heavy rain falling in S.W.

Temperature fallen on our W. coasts, risen in most other places. Readings ranging from 48° at Scilly to 32° over central England. Thermometer rather low all day, and slight frost experienced at night.

Wind westerly over these Islands and France, southerly in Denmark, and south-easterly in Norway. Strong to a gale in force in nearly all places. Gales holding all day in N., but wind falling lighter in S.

Sea very rough in the W. and N.

Barometer fallen except in S. France and over Lapland. Deep depression shown over N. Scotland. Disturbance travelling very slowly eastward later, and recovery commencing in N.

Monday, December 20.

Weather fine in the N.E. of England and E. of Scotland, dull and unsettled elsewhere, with rain in the S. Little change during day, heavy rain falling over France and S. England.

Temperature fallen except over France. Readings ranging from 48° at Prawle Point to 31° at Nottingham and Wick. Maxima below 50° everywhere and below 40° in the N., slight frost in night.

Wind moderate to fresh from W. to S.W. on our northern coasts and over the North Sea, moderate from N. over the S. of England, and blowing a gale from S.W. over France. Very variable breezes reported during day.

Sea very rough in the S.W. and the Skager Rack.

Barometer risen fast over Scotland, fallen elsewhere. Disturbance of 19th shown over Norway, but series of small subsidiary depressions lying over Channel. Pressure highest in S. France.* Depressions travelling eastward later, and mercury rising.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟩⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.	*	*
SCOTLAND, N.	Sumburgh Head*									
	Stornoway*									
	Wick	39	19	31·0	−9·2	5	0·78	+0·08	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	53	42	49·3	+2·8	6	2·93	+2·02	*	*
	Jersey (Noirmont)	54	42	49·4	+3·8	7	3·05	+2·30	10	18

The above observations made in "Scotland, N." and the "Channel Islands" are not included in the Summary on page 1.

* Owing to telegraphic interruption the above returns are incomplete.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	38	25	32·6	− 7·4	6	0·69	+0·24	*	*
	Aberdeen	39	23	32·2	− 7·2	6	1·30	+0·62	14	30
	Glenalmond	40	15	29·0	−10·2	1	?	?		
	Leith	40	23	32·8	− 6·7	5	1·00	+0·60	*	*
2. ENGLAND, N.E.	Shields	42	25	33·7	− 5·6	5	0·66	+0·01	*	*
	Durham	40	20	32·6	− 6 9	4	0·29	−0·49	17	34
	York	44	25	34·3	− 5·5	5	0·45	−0·15	11	22
	Spurn Head	49	33	38·8	− 1·1	2	0·25	?	*	*
	Kelstern (Lincolnsh.) ⁂	44	29	34·7	− 4·8	4	0·66	+0·24	7	13
3. ENGLAND, E.	Hillington ⁂	49	25	37·8	− 2·5	5	0·54	−0·19	8	15
	Yarmouth	49	33	38·6	− 1·9	6	0·45	−0·34	*	*
	Geldeston	50	32	39·5	− 1·0	6	0·53	−0·05	8	15
	Cambridge	52	28	38·3	− 1·7	5	0·55	+0·09	4	8
	Rothamsted	50	31	39·5	− 1·1	7	1·11	+0·55	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	43	26	34·3	− 5·9	3	0·55	0·00	*	*
	Nottingham	46	28	35·8	− 4·5	6	0·87	+0·27	*	*
	Loughborough	50	27	36·9	− 3·6	5	0·77	+0·18	*	*
	Leicester	51	29	38·2	− 2·3	5	0·79	+0·24	7	13
	Birmingham (Oscott)	50	28	36·9	− 4·1	5	0·59	−0·04	*	*
	Shrewsbury ⁂	50	19	34·2	− 7·2	3	0·76	+0·31	*	*
	Churchstoke ⁂	51	23	36·5	− 5·5	6	1·49	?	3	6
	Hereford ⁂	52	27	38·9	− 3·0	5	0·86	+0·16	*	*
	Cirencester	50	29	38·7	− 2·8	6	1·29	+0·56	2	4
	Oxford	51	32	39·3	− 2·0	7	1·22	+0·72	2	4
5. ENGLAND, S.	London†	52	34	41·7	+ 0·7	7	1·48	+0·98	2	4
	Marlborough ⁂	52	31	38·9	− 2·4	7	1·63	+0·91	*	*
	Strathfield Turgiss ⁂	52	31	40·8	− 0·7	6	1·41	+0·88	*	*
	Dover	52	38	43·6	+ 2·7	7	1·72	+0·92	*	*
	Hastings (St. Leonard's)	51	34	43·1	+ 1·6	7	3·13	+2·44	*	*
	Southampton	53	32	42·0	− 0·5	7	2·61	?	2	4
	Hurst Castle	51	35	44·7	+ 1·8	7	2·91	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)‡	47	24	35·0	− 6·2	6	2·54	?	*	*
	Glasgow	40	16	32·3	− 7·9	6	1·28	+0·20	5	10
	Ardrossan	44	23	35·1	− 5·9	6	1·84	+0·94	*	*
	Silloth (Cumberland)	45	22	34·6	− 5·7	3	0·67	−0·03	3	6
	Douglas (Isle of Man)	49	26	39·3	− 2·9	5	0·51	−0·58	18	36
7. ENGLAND, N.W.	Barrow-in-Furness	47	28	37·5	− 4·4	5	0·57	?	*	*
	Stonyhurst	45	27	35·3	− 6·2	5	1·24	+0·12	10	20
	Blackpool ⁂	47	25	36·8	− 4·8	5	0·98	+0·23	*	*
	Manchester	48	25	38·6	− 2·6	2	0·99	+0·20	*	*
	Liverpool Obsy (Bidston)	49	29	37·5	− 4·5	5	1·16	+0·72	*	*
	Llandudno ⁂	51	29	40·3	− 2·2	4	0·78	?	3	6
	Holyhead	50	34	41·0	− 2·3	5	0·60	−0·32	*	*
8. ENGLAND, S.W.	Pembroke	53	31	44·5	+ 0·5	5	1·56	+0·65	14	26
	Barnstaple	54	33	46·3	+ 3·0	7	3·41	+2·45	*	*
	Falmouth	53	36	46·6	+ 0·6	7	3·72	+2·77	1	2
	Plymouth	54	32	45·7	+ 0·3	7	1·96	+1·14	*	*
	Prawle Point	52	33	45·7	+ 0·5	7	3·47	?	*	*
9. IRELAND, N.	Londonderry	47	27	36·0	− 6·0	6	0·89	+0·03	*	*
	Mullaghmore	49	29	39·4	− 2·6	6	1·61	?	*	
	Markree Castle	50	20	36·1	− 6·1	6	0·79	+0·09	17	34
	Brookeborough	48	23	35·5	− 6·5	6	1·32	?	*	*
	Armagh	47	27	36·6	− 6·0	5	0·71	+0·07	18	36
	Donaghadee	48	31	38·4	− 3·8	4	0·56	?	*	*
10. IRELAND, S.	Dublin	51	32	39·5	− 3·3	5	1·23	+0·68	18	35
	Parsonstown	52	23	37·3	− 5·1	7	1·19	+0·49	12	23
	Waterford	? 53	29	?40·2	?− 2·8	5	0·82	?	*	*
	Roche's Point	55	32	44·2	+ 0·6	6	1·61	+0·36	*	*
	Valentia	54	31	43·4	− 0·1	6	1·68	+0·25	16	30
	Foynes	54	27	40·6	− 2·3	6	1·60	?	*	*

Stations marked ⁂ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.
† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory.
‡ The amount of Rainfall at Laudale being exceptionally heavy, it has not been used in obtaining the Rainfall value given for "Scotland, W." on page 1.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 52.] WEEK ENDING MONDAY, DECEMBER 27, 1880. [*Price 2d.* [*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Geldeston, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Waterford, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.)				Rainfall. (Amounts in tenths of an inch.)			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	48	14	32	8 below.	5	13	7 more.	11	24
	2. ENGLAND, N.E.	50	24	36	3 below.	5	11	7 more.	18	35
	3. ENGLAND, E.	55	26	39	1 below.	5	10	5 more.	15	28
	4. MID. COUNTIES	54	23	38	2 below.	5	14	8 more.	13	24
	5. ENGLAND, S.	54	27	41	0 (average).	5	10	4 more.	14	25
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	51	23	37	4 below.	5	12	4 more.	13	26
	7. ENGLAND, N.W.	52	23	39	2 below.	6	23	17 more.	10	20
	8. ENGLAND, S.W.	54	30	45	1 above.	6	17	10 more.	5	10
	9. IRELAND, N.	51	21	36	6 below.	6	14	5 more.	10	20
	10. IRELAND, S.	55	24	41	2 below.	5	17	7 more.	10	20

General Remarks.

Weather has been dull and unsettled generally with heavy falls of snow in Scotland, much rain, and some snow or sleet over England and Ireland. On the 25th, however, the sky was comparatively clear, and continued so in the S.E. of England on the 26th.

Temperature was about equal to the mean in "England, S." and "England, S.W.," but below it in all other districts. In "Scotland, E." the deficit was as much as 8°, and in "Ireland, N." 6°. The mildest day in most places was the 23rd, when the thermometer rose to about 54° or 55° in most of the English districts and "Ireland, S.," while the lowest readings were registered on the 27th, when a reading of 14° was recorded at Aberdeen, and 23° or 24° over the greater part of England and Ireland. In the extreme N. of Scotland, readings were even lower, a minimum of 10° being recorded at Wick.

Rainfall was much more than the mean in all districts, the excess being very large in the western parts of England.

Bright sunshine shows an increase in most places, the percentage of total possible duration ranging from 10 in "England, S.W." to 35 in "England, N.E."

Wind at the commencement of the period was fresh from N.W. on all our coasts, but by the 22nd it had backed to S.W. and continued to blow freshly from that quarter, except in the extreme N. of Scotland (where an easterly gale prevailed) during the 23rd; on the two following days, however, fresh north-westerly winds again prevailed on all coasts, but on the 26th an easterly breeze had appeared in southern Ireland, and on the 27th the wind circulated round a depression which lay over the W. of England,—being strong from W. in the S., moderate from S.E. in the E., light from E. in the N., and from N. in the W. and S. of Ireland.

Q 4211. 100.—12/80. Wt. 26. E. & S.

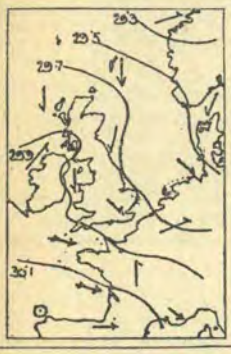
II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending December 27, 1880.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.

CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.



Tuesday, December 21.

Weather fine over nearly the whole of these Islands and in the Netherlands, but sky overcast over the Continent generally, in the S. of Ireland, and extreme N. of Scotland. Snow falling at Wick and in the Shetlands. Weather fine except in extreme W. and N. all day.

Temperature fallen except in W.; readings ranging from 50° at Scilly to 29° at Wick. Maxima 40° or below in E. and N., and sharp frost in those districts at night.

Wind northerly in Scotland and north-westerly to westerly over England, Ireland, and France; blowing a gale at the mouth of the Channel and over the Bay of Biscay, but moderate generally. Wind backing to S. and S.E. in W. later.

Sea rough in the S. and S.W. and round the Shetlands.

Barometer risen everywhere, slowly over these Islands and quickly over France. Readings highest in S. France, with large depression in N. Scandinavia. Brisk fall commencing in S. Ireland later.

Wednesday, December 22.

Weather cloudy or dull in nearly all parts of western Europe. Rain falling over the greater part of England and Ireland, and snow in Yorkshire and S. Scotland. Dull rainy weather all day.

Temperature risen at our southern stations and in W. France, fallen in the E. of that country and over the northern half of our area. Sharp frost in N. and readings ranging from 54° at Valentia to 22° at Aberdeen. Frost all day in Scotland.

Wind westerly to south-westerly in S., southerly in the N. of England, and south-easterly on our northern coasts. Blowing strongly in S. Little change during day, but gale springing up in SW.

Sea rough S.W. and W.

Barometer falling except in Scandinavia. Readings highest in S. France, with well marked depression advancing over Ireland. Barometer falling all day, and disturbance advancing north-eastwards.

Thursday, December 23.

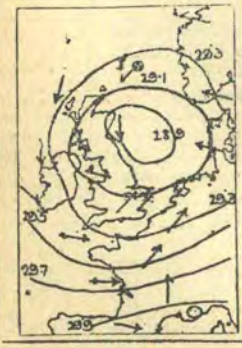
Weather fine in the E. of England, dull and unsettled elsewhere, with a thunderstorm in W. Ireland and rain in N. Scotland. Dull weather and rain extending to the E. during day.

Temperature fallen on our S.W. coasts and over Scandinavia, risen elsewhere—quickly N.E. Readings ranging from 52° in S.W. to 36° at Nairn. Maxima below 40° in N., but between 50° and 55° in S.

Wind south-westerly over France, England, and Ireland, but easterly in N. Scotland; fresh in force generally, and blowing a gale over Bay of Biscay and at Wick. Gales all day in S.W. and extreme N.

Sea rough in the S., S.W., and N.

Barometer falling in all places except Sweden. Depression shown off W. Scotland. Pressure giving way all day, and disturbance moving eastwards slowly.



Friday, December 24.

Weather fine in the extreme W. of Ireland and N. of Norway, dull in nearly all other places, with rain in most districts, and snow in N. Scotland. Improving over Ireland and England later, but snow falling continuously in Scotland.

Temperature fallen several degrees generally; readings ranging from 51° at Scilly to 34° in the Shetlands. Maxima between 40° and 50° in most places, but below 40° in the North. Brisk fall taking place at night.

Wind northerly over Scotland and Ireland, westerly over England and France, and south-westerly to south-easterly over the countries to the eastward of the North Sea. Blowing freshly or strongly except in the E., and reaching a gale in the S.W. Little change later.

Sea very rough in the S.W., rough in the S. and N.W.

Barometer rising in the W., falling elsewhere; disturbance shown over the North Sea off the E. coast of Scotland. Pressure increasing generally and disturbance moving away.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, December 25.

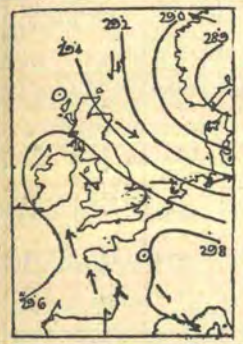
Weather fine over nearly the whole of England, but cloudy or dull in most other places. Snow falling at Wick. Fine all day over England.

Temperature fallen several degrees over the whole of western Europe. Sharp frost prevailing in the E.; readings ranging from 43° at Scilly to 30° in London and at Aberdeen. Temperature low all day.

Wind north-westerly to westerly on most coasts; fresh or strong in force, except in the S.E., and blowing a gale in S.W. France. North-westerly to westerly breezes prevailing all day.

Sea rough in N. and N.W., and in the Bay of Biscay.

Barometer rising over these Islands and the Netherlands, falling elsewhere. Depression now over Skager Rack. Pressure increasing all day, and disturbance moving on towards Baltic.



Sunday, December 26.

Weather fine over nearly the whole of Great Britain and the N.E. of France, cloudy or dull in most other places. Snow falling over the Baltic and hail at Fanö. Fine in the E. all day, but becoming cloudy with sleet at night.

Temperature fallen in nearly all places except the S. of England. Readings ranging from 45° at Scilly to 26° at Parsonstown and 27° at Nottingham. Maxima low except in S. and W., and severe frost in N. at night.

Wind southerly to easterly in the W. of France and on our S.W. coasts, north-westerly to westerly elsewhere; fresh in force except in S.E. Southerly wind extending eastward over England during day.

Sea moderate to slight.

Barometer falling in S.W., rising elsewhere. Area of high pressure lying over France, with deep depression over Sweden and shallow disturbance approaching our S.W. coasts. New depression in S.W. advancing slowly over us later, and barometer falling.

Monday, December 27.

Weather fine in N. Scotland and parts of Scandinavia, cloudy and unsettled generally, with rain or sleet in many places. Fine in N. all day, cloudy and rainy in S.

Temperature fallen quickly in N., risen briskly in S. Severe frost in Scotland. Ranging from 52° at Scilly to 10° at Wick. Weather mild all day in S., very cold in N.

Wind westerly and south-westerly over France, the Channel, and S. of England, easterly in the N., blowing strongly in S., light or moderate in N. No change during day.

Sea rough South.

Barometer falling except in S. France and over Scandinavia. Depression in S.W. suddenly becoming deeper. Disturbance passing eastward during day and filling up, but second depression appearing in S.W.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	39	25	32·9	−7·7	6	0·23	−0·52	*	*
	Stornoway	39	15	31·1	−9·9	5	1·37	−0·03	4	9
	Wick	40	10	29·0	−11·0	5	2·20	+1·51	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	55	38	48·1	+1·8	6	2·10	+1·11	*	*
	Jersey (Noirmont)	55	33	46·5	+1·5	5	1·10	+0·34	13	23

The above observations made in "Scotland, N. and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	40	18	30·4	− 9·2	4	0·91	+0·44	*	*
	Aberdeen	42	14	30·5	− 8·5	6	1·95	+1·30	11	24
	Glenalmond	39	15	31·1	− 7·8	5	1·44	?	?	?
	Leith	48	27	34·8	− 4·4	5	0·82	+0·42	*	*
2. ENGLAND, N.E.	Shields	48	28	36·5	− 2·5	4	1·00	+0·40	*	*
	Durham	46	24	33·2	− 5·7	5	1·35	+0·65	21	43
	York	48	28	36·7	− 2·3	5	1·53	+0·93	?	?
	Spurn Head	50	31	38·5	− 0·6	5	0·75	?	*	*
	Kelstern (Lincolnsh.) ℳ	50	27	35·2	− 3·8	5	1·03	+0·61	14	27
3. ENGLAND, E.	Hillington ℳ	53	27	37·3	− 2·2	5	0·94	+0·41	12	23
	Yarmouth	51	30	38·6	− 0·9	6	0·86	+0·13	*	*
	Geldeston	54	28	39·3	− 0·3	5	0·85	+0·35	17	32
	Cambridge	55	27	39·1	0·0	6	1·11	+0·68	16	30
	Rothamsted	53	26	38·2	− 1·7	5	1·41	+0·81	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	51	27	37·5	− 2·0	5	1·12	+0·61	*	*
	Nottingham	52	23	36·7	− 3·1	7	1·29	+0·66	*	*
	Loughborough	52	27	39·2	− 0·8	6	1·06	+0·50	*	*
	Leicester	53	27	38·9	− 1·3	6	1·22	+0·65	6	12
	Birmingham (Oscott)	51	27	37·5	− 3·0	6	1·53	+0·89	*	*
	Shrewsbury ℳ	52	24	36·6	− 3·3	5	1·54	+1·12	*	*
	Churchstoke ℳ	53	26	37·7	− 4·1	4	1·57	?	13	25
	Hereford ℳ	54	27	39·1	− 2·1	5	1·40	+0·78	*	*
	Cirencester	53	24	38·4	− 2·7	5	1·62	+0·86	14	26
	Oxford	53	29	39·9	− 0·7	5	1·18	+0·64	17	32
5. ENGLAND, S.	London†	54	27	39·7	− 0·9	5	1·03	+0·48	15	28
	Marlborough ℳ	52	28	40·0	− 1·0	5	1·29	+0·49	*	*
	Strathfield Turgiss ℳ	54	27	40·0	− 1·2	5	0·73	+0·16	*	*
	Dover	52	32	42·2	+ 1·7	5	1·21	+0·41	*	*
	Hastings (St. Leonard's)	52	31	41·7	+ 0·7	6	1·18	+0·49	*	*
	Southampton	54	28	41·3	− 0·7	5	0·78	?	12	22
	Hurst Castle	51	30	42·5	0·0	6	0·90	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	48	23	35·6	− 5·4	4	0·85	?	*	*
	Glasgow	45	28	33·6	− 5·9	6	1·36	+0·26	9	19
	Ardrossan	49	28	38·0	− 3·0	5	1·45	+0·48	*	*
	Silloth (Cumberland)	49	28	35·7	− 4·2	5	0·73	0·00	15	31
	Douglas (Isle of Man)	51	29	39·1	− 2·9	6	1·81	+0·70	14	28
7. ENGLAND, N.W.	Barrow-in-Furness	48	31	38·5	− 2·5	6	2·23	?	*	*
	Stonyhurst	48	27	35·9	− 5·1	5	3·20	+2·10	13	26
	Blackpool ℳ	48	29	38·8	− 2·3	6	2·01	+1·26	*	*
	Manchester	49	23	38·0	− 2·5	6	3·33	+2·53	*	*
	Liverpool Obsy (Bidston)	52	32	40·0	− 1·3	7	2·18	+1·73	*	*
	Llandudno ℳ	52	34	40·8	− 1·2	3	1·23	?	7	13
	Holyhead	51	34	42·2	− 0·7	6	1·70	+0·75	*	*
8. ENGLAND, S.W.	Pembroke	52	35	44·9	+ 1·4	5	2·49	+1·53	8	15
	Barnstaple								*	*
	Falmouth	54	37	46·8	+ 1·0	7	1·99	+1·00	2	4
	Plymouth	54	30	44·9	− 0·1	6	1·25	+0·34	*	*
	Prawle Point	53	31	44·8	− 0·2	6	0·98	?	*	*
9. IRELAND, N.	Londonderry	48	23	35·5	− 5·9	5	1·36	+0·46	*	*
	Mullaghmore	51	32	38·7	− 3·1	5	1·77	?	*	*
	Markree Castle	51	24	36·0	− 6·0	5	1·21	+0·51	6	12
	Brookeborough	50	21	38·8	− 7·7	5	1·45	?	*	*
	Armagh	50	27	35·7	− 6·6	7	1·27	+0·60	14	28
	Donaghadee	50	26	37·5	− 4·5	6	1·28	?	*	*
10. IRELAND, S.	Dublin	54	29	38·4	− 4·1	5	1·28	+0·74	13	25
	Parsonstown	53	24	37·7	− 4·2	5	0·97	+0·24	14	27
	Waterford								*	*
	Roche's Point	55	33	44·0	+ 0·7	5	2·28	+0·95	*	*
	Valentia	55	32	44·0	+ 0·8	6	2·35	+0·86	4	8
	Foynes								*	*

Stations marked ℳ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.
† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

WEEKLY WEATHER REPORT.

ISSUED BY THE METEOROLOGICAL OFFICE LONDON.

PUBLISHED BY J. D. POTTER, 31 POULTRY, AND 11 KING STREET, TOWER HILL; AND E. STANFORD, 55 CHARING CROSS.

VOL. III. No. 53.] WEEK ENDING MONDAY, JANUARY 3, 1881. [*Price 2d.*
[*Annual subscription, post paid, 12s. 6d.*

I.—SUMMARY OF TEMPERATURE, RAINFALL, AND DURATION OF SUNSHINE IN THE UNITED KINGDOM, FOR AGRICULTURAL AND SANITARY PURPOSES.

Explanation of the Map.—The United Kingdom has been divided into Meteorological districts, ten of which are included in the following Summary. They are separately numbered and shaded on the Map, and are similarly numbered in the letterpress, where they are also named.

The black dots show the positions of the stations furnishing the reports on which the Summary is based. The names of the Stations are given in the following list under those of the districts to which they severally belong.

1. SCOTLAND, E.—Nairn, Aberdeen, Glenalmond, Leith.
2. ENGLAND, N.E.—Shields, Durham, York, Spurn Head, Kelstern (Lincolnshire).
3. ENGLAND, E.—Hillington, Yarmouth, Geldeston, Cambridge, Rothamsted.
4. MIDLAND COUNTIES.—Bawtry (Hesley Hall), Nottingham, Loughborough, Leicester, Birmingham (Oscott), Shrewsbury, Churchstoke, Hereford, Cirencester, Oxford.
5. ENGLAND, S.—London, Marlborough, Strathfield Turgiss, Dover, Hastings (St. Leonard's), Southampton, Hurst Castle.
6. SCOTLAND, W.—Laudale (Loch Sunart), Glasgow, Ardrossan, Silloth (Cumberland), Douglas (Isle of Man).
7. ENGLAND, N.W.—Barrow-in-Furness, Stonyhurst, Blackpool, Manchester, Liverpool Observatory (Bidston), Llandudno, Holyhead.
8. ENGLAND, S.W.—Pembroke, Barnstaple, Falmouth, Plymouth, Prawle Point.
9. IRELAND, N.—Londonderry, Mullaghmore, Markree Castle, Brookeborough, Armagh, Donaghadee.
10. IRELAND, S.—Dublin, Parsonstown, Waterford, Roche's Point, Valentia, Foynes.

Explanation of Summary.—The data for mean *Temperature* in the corresponding week of previous years are derived from the 13 years observations (1857-69), as determined by Mr. Buchan. Those for mean *Rainfall* have been obtained from the 10 years observations 1866-75. A Rainy day is one on which at least a hundredth of an inch has fallen.

	Districts.	Temperature. (In Degrees Fahrenheit.) Highest observed.	Lowest observed.	Average for the Week.	Above or below the Mean for the Week.	Rainfall. (Amounts in tenths of an inch.) Number of Rainy Days.	Rainfall for the Week.	More or less than the Mean for the Week.	Bright Sunshine. Number of Hours recorded.	Equivalent percentage of total possible Duration.
Principal Wheat-producing Districts.	1. SCOTLAND, E.	51	14	36	3 below.	2	? 3	? 1 less.	7	15
	2. ENGLAND, N.E.	48	26	38	1 below.	4	8	4 more.	8	16
	3. ENGLAND, E.	54	29	40	1 above.	4	5	1 less.	3	6
	4. MID. COUNTIES	54	29	40	1 below.	3	8	0(average).	5	10
	5. ENGLAND, S.	54	28	42	1 above.	3	7	1 less.	5	9
Principal Grazing, &c. Districts.	6. SCOTLAND, W.	49	22	38	2 below.	4	6	5 less.	1	3
	7. ENGLAND, N.W.	48	25	40	1 below.	4	12	3 more.	5	10
	8. ENGLAND, S.W.	55	31	45	1 above.	5	11	1 more.	6	11
	9. IRELAND, N.	49	16	38	4 below.	4	2	5 less.	4	7
	10. IRELAND, S.	52	21	39	3 below.	3	4	7 less.	7	14

General Remarks.

Weather has been very dull in all parts of the Kingdom with rather heavy rain or snow over the northern parts of England; in Ireland and Scotland the weather was comparatively dry.

Temperature was 3° or 4° below the mean in Ireland and the E. of Scotland, but elsewhere it was about its mean value. The lowest reading (14°) occurred at Aberdeen and was registered on the 28th, a reading of 21° being recorded at Parsonstown at the same time. At most other stations the thermometer was lowest either on the 30th or 31st December, when it fell to 16° at Markree Castle and to 22° at Ardrossan. In most parts of England the minima varied from 26° to 29°.

Rainfall was in excess of the mean over the northern, and south-western districts of England, but in defect nearly in all other places.

Bright sunshine was very deficient in all parts of the country, the percentage of total possible duration being only 3 in "Scotland, W.," 6 in "England, E.," 7 in "Ireland, N."; in "England, N.E.," where it was greatest, the percentage was only 16.

Wind on the 28th was fresh from the westward in the S., and light from the eastward at the more northern stations; but on the following day it circulated round a depression which lay over the S. of England, blowing strongly from S. in the E., moderately from N.E. in the N., and strongly from N. in the W. During the next four days, westerly or north-westerly breezes prevailed on all coasts; and at the close of the period an anticyclonic circulation was shown,—light south-easterly airs prevailing in the S.E. and S., southerly breezes in the W., and south-westerly winds in the N.

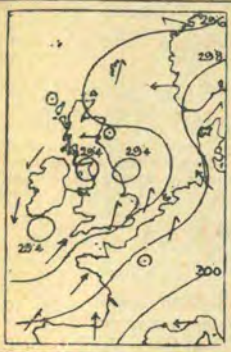
Q 4325. 100.—1/81. Wt. 26. E. & S.

II.—SUMMARY OF WEATHER IN WESTERN EUROPE
during the Week ending January 3, 1881.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND. | CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.



Tuesday, December 28.

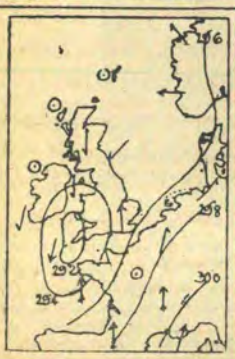
Weather fine in the extreme N. of Scotland and S.E. of England and at several Scandinavian stations, dull elsewhere, with rain in the W. and N.E. Cloudy and unsettled all day except in N.

Temperature fallen over Norway and Sweden, risen elsewhere; readings ranging from 52° at Scilly to 23° at Nairn. Maxima low except in S., and sharp frost felt in Scotland at night.

Wind easterly to north-easterly in the N., south-westerly to southerly in the S., where it blew freshly. Little change in S. during day, but wind becoming more variable in N. later on.

Sea rough in the S.W. and S.

Barometer rising except over N. England, the change being rapid over Scandinavia. Large band of low pressure extending from S.W. to N.E. across these Islands. Pressure increasing during day and band of low readings breaking into two parts.



Wednesday, December 29.

Weather again dull and very unsettled except in the extreme N. and S.E.; rain falling in N.E. and S.W. Dull, unsettled, and rainy all day except extreme W.

Temperature risen on the Continent, fallen at all but our north-eastern stations; readings ranging from 50° in the S. to 21° at Wick. Maxima low in N.

Wind southerly all over France and the eastern districts of England, variable in Scotland, and northerly on our western coasts. Gales reported in France. Scarcely any change during day, but gale extending to S.E. of England.

Sea rough in S.W. and E.

Barometer falling in nearly all places. Southern portion of yesterday's depression become very much deeper, and northern portion travelling northward to Norway. The southern portion moving north-eastward during day, and barometer falling below 29 ins. over central England.

Thursday, December 30.

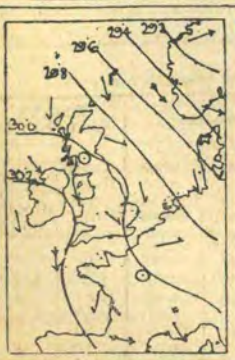
Weather fine over the N.E. of France, cloudy and unsettled generally, with rain in several places. Unsettled all day but clearing considerably in Scotland and the S.E. of England in evening.

Temperature fallen rapidly except in N. Scotland and over Norway; readings ranging from 46° at Scilly to 22° at Parsonstown. Temperature low all day, frosty in N. and E.

Wind northerly at most of our stations, but drawing into W. over France and the Channel, and into S.W., S., and S.E. on the eastern shores of the North Sea. Northerly wind extending to the Channel later.

Sea rough in the S., the S.W., and N.E.

Barometer rising over the greater part of these Islands and France, falling fast in Scandinavia. Depression shown near Skudesnaes. Pressure increasing all day, and disturbance travelling north-eastward.



Friday, December 31.

Weather, though rather cloudy, moderately fine over a large part of western Europe, but snow falling at Spurn Head, and rain at Brest and Biarritz. Moderately fine all day, but showers falling in W. Ireland in evening.

Temperature fallen, except in the W.; ranging from 44° at Scilly to 27° at Parsonstown, and 28° at Shields. Thermometer rather low all day, and slight frost in E. at night.

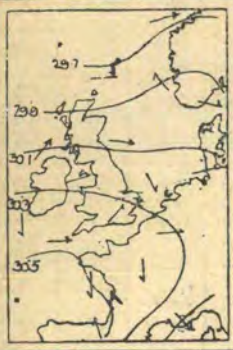
Wind northerly in nearly all places; moderate to fresh on most coasts, and blowing a gale at Scilly. Little change later, beyond wind backing to W. and S.W. in W. Ireland.

Sea rough on several parts of our coasts and off the W. of Norway.

Barometer rising everywhere, except Sweden,—quickly in W. Depression shown over central Scandinavia, and area of high pressure forming in S.W. Increase of pressure lasting all day, but slackening somewhat in N.W.

Synoptic Weather Charts.—8 a.m.

BAROMETER AND WIND.



CLOUD, RAIN, SEA, AND TEMPERATURE.

Weather during the 24 hours succeeding the date of the Charts.

Saturday, January 1, 1881.

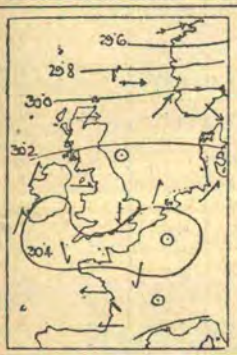
Weather fine over the S.E. of England and N. Germany, more or less cloudy elsewhere; some showers reported from the S.W., and fog or mist from several stations. Rain falling at all western stations, and sky becoming cloudy in S.E.

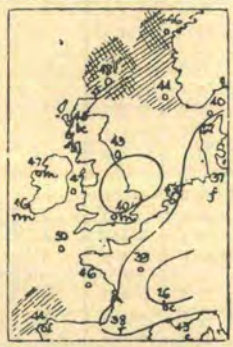
Temperature fallen on the Continent generally, risen over these Islands; readings ranging from 50° at Scilly to 32° in London. Thermometer rising during day, and maxima between 45° and 52°. No frost at night.

Wind westerly over these Islands and the North Sea, drawing into N. and N.E. in parts of France. Generally moderate in force. Moderate or light westerly winds prevailing all day.

Sea moderate or slight, except at Barrow-in-Furness.

Barometer rising everywhere,—quickly in Norway. Area of high pressure (30·5 ins.) lying over Bay of Biscay, with low pressures to the northward of Scotland and in N. Scandinavia. Pressure giving way a little in S. later; still increasing in W. and N.





Sunday, January 2.

Weather fine in some parts of the N.E. of England and Scotland, dull elsewhere, with mist or fog in several places, especially the S.E. Dense fog prevailing in the S.E. all day, and dull misty weather elsewhere.

Temperature fallen over central England, risen elsewhere; ranging from 50° at Scilly to 31° at Nottingham. Maxima between 40° and 45° in the S.E., between 45° and 50° elsewhere.

Wind easterly over France, westerly over these Islands and Scandinavia, moderate generally, but gales blowing in the Shetlands and at Christiansund. Southerly winds blowing in Ireland during day.

Sea very rough in the far N., moderate or smooth round our coasts.

Barometer falling slightly at Valentia, and more briskly in W. France and over Norway and Sweden, rising elsewhere. Band of high pressure lying over our S.W. coasts, the Channel, and Netherlands. Pressure giving way a little in W. later.

Monday, January 3.

Weather mild and cloudy generally, with slight showers in a few places during the day.

Temperature showing no important change till night; the 8 A.M. readings varying from 40° to 45° in most places, and the maxima ranging as high as 50° on our S.W. coasts, and from 45° to 49° elsewhere. Night becoming colder, and foggy in places.

Wind southerly in the W., westerly in the N., but shifting to the north-eastward on our extreme S. and S.E. coasts: moderate or light nearly everywhere, strong in the far W. and calm inland. Westerly gales felt in the N.W. of Norway.

Sea rough in the N., and off the W. of Ireland.

Barometer highest in the S.E., lowest in the N.; falling at first in the W. of Ireland, but subsequently recovering, and high pressure area beginning to move northwestward.

Explanation of Charts.—The two Charts for each day show the general condition of the weather over Western Europe at 8 a.m. In the left-hand Chart the height of the barometer is expressed by "isobars," the value of each line being given in figures. The prevalent winds are shown by arrows, which are drawn flying *with the wind*, the force being indicated thus: ⟫⟶ = a heavy gale; ⟶ = a gale; ⟶ = a fresh to strong breeze; ⟶ = a light to moderate breeze; and ⊙ = a calm. In the right-hand Chart the weather is indicated as follows:—b = blue sky; c = detached clouds; o = overcast; m = misty (hazy); f = foggy; q = squally; r = rain; h = hail; s = snow; l = lightning; and t = thunder. The general distribution of temperature is shown by "isotherms," and the readings at certain places are given in figures. Diagonal lines = rough sea, the shading being proportional to the disturbance.

VALUES for each STATION in SCOTLAND, N. and the CHANNEL ISLANDS.

DISTRICTS.	NAMES OF STATIONS.	Temperature. Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	Rainfall. No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	Bright Sunshine. No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
SCOTLAND, N.	Sumburgh Head	49	25	38·0	−2·0	4	0·34	−0·36	*	*
	Stornoway	50	19	36·7	−3·3	4	0·32	−1·02	? 5	? 11
	Wick	47	10	32·5	−7·3	3	0·49	−0·16	*	*
CHANNEL ISLANDS	Scilly (St. Mary's)	54	40	47·3	+1·3	6	1·22	+0·17	*	*
	Jersey (Noirmont)	53	35	44·9	+0·4	6	0·63	−0·16	13	23

The above observations made in "Scotland, N. and the "Channel Islands" are not included in the Summary on page 1.

The data from which the summary on page 1 has been calculated, are as follow:

Districts.	Names of Stations.	Temperature.				Rainfall.			Bright Sunshine.	
		Highest observed.	Lowest observed.	Average for the Week.	Difference from the Mean.	No. of Days with Rain.	Total fall in the Week.	Difference from the Mean.	No. of Hours recorded.	Percentage of possible Duration.
		°	°	°	°		Inches.	Inches.		
1. SCOTLAND, E.	Nairn	49	15	? 35·2	?– 3·9	3	? 0·21	?–0·29	*	*
	Aberdeen	46	14	34·7	– 4·0	4	0·66	+0·01	7	15
	Glenalmond	51	23	37·3	– 1·4	0	–	?	?	?
	Leith	48	27	37·0	– 2·0	2	0·29	–0·10	*	*
2. ENGLAND, N.E.	Shields	44	28	37·7	– 1·3	3	1·00	+0·45	*	*
	Durham	45	26	35·9	– 2·6	3	1·10	+0·50	7	14
	York	48	30	37·9	– 0·9	4	0·96	+0·41	?	?
	Spurn Head	47	32	39·4	+ 0·9	4	0·29	?	*	*
	Kelstern (Lincolnsh.) ✠	47	28	38·1	– 0·6	4	0·49	+0·07	9	17
3. ENGLAND, E.	Hillington ✠	51	29	39·6	+ 0·6	5	0·54	–0·18	3	6
	Yarmouth	51	30	38·7	0·0	4	0·47	–0·23	*	*
	Geldeston	52	30	40·2	+ 1·3	5	0·34	–0·13	2	4
	Cambridge	54	29	39·4	+ 1·2	4	0·48	+0·08	4	8
	Rothamsted	52	30	39·7	+ 0·5	4	0·72	+0·12	*	*
4. MIDLAND COUNTIES	Bawtry (Hesley Hall)	48	29	37·9	– 1·1	3	0·97	+0·47	*	*
	Nottingham	49	30	38·1	– 0·9	3	0·54	–0·16	*	*
	Loughborough	50	30	39·2	– 0·3	3	0·73	+0·18	*	*
	Leicester	50	32	41·2	+ 1·3	5	0·49	–0·05	4	8
	Birmingham (Oscott)	47	30	38·7	– 1·3	3	0·88	+0·23	*	*
	Shrewsbury ✠								*	*
	Churchstoke ✠	49	29	39·3	– 1·7	3	1·48	?	5	10
	Hereford ✠	51	31	41·0	0·0	2	1·14	+0·39	*	*
	Cirencester	50	31	39·4	– 1·0	0	–	–0·82	7	13
	Oxford	54	33	39·9	+ 0·7	4	0·50	+0·05	4	8
5. ENGLAND, S.	London†	54	30	40·6	+ 0·6	5	0·58	–0·04	3	5
	Marlborough ✠	53	28	39·4	– 1·0	3	0·89	+0·09	*	*
	Strathfield Turgiss ✠	54	30	41·2	+ 0·2	2	0·58	–0·02	*	*
	Dover	51	33	42·7	+ 2·7	3	0·57	–0·23	*	*
	Hastings (St. Leonard's)	51	31	42·3	+ 1·8	3	0·60	–0·10	*	*
	Southampton	53	32	42·2	+ 0·9	3	0·81	?	7	13
	Hurst Castle	52	33	43·6	+ 2·0	3	0·76	?	*	*
6. SCOTLAND, W.	Laudale (Loch Sunart)	49	24	36·3	– 4·0	5	0·73	?	*	*
	Glasgow	47	27	38·4	– 0·6	3	0·03	–1·11	0	0
	Ardrossan	49	22	38·7	– 1·3	3	0·23	–0·81	*	*
	Silloth (Cumberland)	46	? 23	? 36·8	?– 2·3	6	1·09	+0·30	0	0
	Douglas (Isle of Man)	49	31	40·5	– 1·0	3	0·69	–0·51	4	8
7. ENGLAND, N.W.	Barrow-in-Furness	46	28	39·2	– 0·8	5	1·62	?	*	*
	Stonyhurst	45	26	37·8	– 2·2	5	1·97	+0·89	7	14
	Blackpool ✠	45	30	39·1	– 1·9	4	1·32	+0·57	*	*
	Manchester	47	25	38·5	– 0·5	2	0·13	–0·64	*	*
	Liverpool Obsy (Bidston)	48	32	40·7	+ 0·2	3	1·06	+0·56	*	*
	Llandudno ✠	48	35	41·5	0·0	3	1·34	?	3	6
	Holyhead	48	35	42·0	0·0	4	0·81	–0·15	*	*
8. ENGLAND, S.W.	Pembroke	51	34	43·8	+ 1·7	5	1·58	+0·50	7	13
	Barnstaple	55	34	45·4	+ 2·9	4	0·88	–0·17	*	*
	Falmouth	54	37	45·5	+ 0·5	4	1·41	+0·41	5	9
	Plymouth	54	31	44·3	– 0·2	5	0·87	+0·22	*	*
	Prawle Point	53	33	44·8	– 0·2	6	0·55	?	*	*
9. IRELAND, N.	Londonderry	47	22	36·6	– 4·2	6	0·39	–0·51	*	*
	Mullaghmore	49	29	40·0	– 1·0	5	0·27	?	*	*
	Markree Castle	49	16	36·0	– 5·5	3	0·25	–0·47	3	6
	Brookeborough	47	19	35·9	– 4·9	2	0·06	?	*	*
	Armagh	46	28	37·6	– 4·4	3	0·07	–0·64	4	8
	Donaghadee	48	31	39·8	– 1·2	3	0·11	?	*	*
10. IRELAND, S.	Dublin	48	29	38·7	– 3·3	1	0·18	–0·51	6	12
	Parsonstown	48	21	35·4	– 5·6	3	0·20	–0·58	3	6
	Waterford								*	*
	Roche's Point	50	32	40·7	– 2·3	3	0·58	–0·81	*	*
	Valentia	52	33	43·1	+ 0·2	5	0·74	–0·76	12	23
	Foynes	51	28	38·6	– 3·0	2	0·11	?	*	*

Stations marked ✠ are in connection with the Meteorological Society.

* An asterisk is inserted in all places for which the information is not usually received.
† The Sunshine values for London are the means of observations made at Hampstead and the Kew Observatory.

Meteorological Office,
116, Victoria Street, S.W.

(Signed) ROBERT H. SCOTT,
Secretary.

SUMMARY OF RAINFALL AND TEMPERATURE for the FIRST QUARTER of the YEAR (January 1st to March 31st).

Vol. III., No. 13a. (Issued as Part of the Weekly Weather Report for the year 1880.)

	YEARS.	PRINCIPAL WHEAT-PRODUCING DISTRICTS.							PRINCIPAL GRAZING, &c. DISTRICTS.						BRITISH ISLANDS GENERALLY.
		0. SCOTLAND, N.	1. SCOTLAND, E.	2. ENGLAND, N.E.	3. ENGLAND, E.	4. MIDLAND COUNTIES.	5. ENGLAND, S.	MEAN FOR ALL THE WHEAT-PRODUCING DISTRICTS.	6. SCOTLAND, W.	7. ENGLAND, N.W.	8. ENGLAND, S.W.	9. IRELAND, N.	10. IRELAND, S.	MEAN FOR ALL THE GRAZING, &c. DISTRICTS.	
RAINFALL (in inches).		ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.
	1866	14·8	11·3	5·8	7·4	7·1	11·4	9·6	15·4	13·4	16·9	13·7	12·0	14·3	11·7
	1867	10·7	9·5	5·4	5·7	8·1	8·8	8·0	9·9	11·1	15·2	11·8	10·7	11·7	9·7
	1868	19·1	11·7	4·9	5·4	6·7	7·5	9·2	17·6	13·3	11·9	13·0	10·5	13·3	11·1
	1869	11·8	8·9	6·2	6·2	7·7	9·0	8·3	11·4	12·2	14·0	12·1	12·1	12·4	10·1
	1870	6·4	6·7	4·8	3·9	5·1	6·0	5·5	8·8	9·0	10·7	8·6	9·7	9·4	7·2
	1871	9·4	6·9	3·8	3·9	4·8	6·1	5·8	11·7	8·7	10·0	10·7	9·4	10·1	7·8
	1872	8·2	11·2	7·8	6·1	9·8	10·1	8·9	15·2	14·0	19·5	12·7	13·1	14·9	11·6
	1873	7·9	7·2	5·3	5·4	7·1	8·4	6·9	10·0	9·6	14·1	8·8	11·9	10·9	8·7
	1874	11·5	6·5	3·5	3·1	5·7	4·4	5·8	8·6	11·0	12·5	8·4	7·7	9·6	7·5
	1875	8·4	7·0	3·9	3·7	5·8	6·7	5·9	9·8	8·7	12·6	7·1	10·2	9·7	7·6
	Means for 10 years, 1866 to 1875	10·8	8·7	5·1	5·1	6·8	7·8	7·4	11·8	11·1	13·7	10·7	10·7	11·6	9·3
	1876	13·4	9·5	6·3	6·7	8·2	7·5	8·6	12·1	12·0	10·9	10·0	10·0	11·0	9·7
	1877	11·9	9·8	7·1	7·6	8·3	10·7	9·2	14·2	15·4	14·2	13·4	11·4	13·7	11·3
	1878	9·3	4·3	4·9	4·6	3·8	4·9	5·3	11·0	7·3	6·2	8·2	7·9	8·1	6·6
	1879	5·5	7·0	5·2	6·3	6·2	8·3	6·4	8·5	6·7	11·2	6·7	11·4	8·9	7·5
	1880	7·4	5·3	3 1	3·3	4·2	4·6	4·7	9·1	6·2	6·7	7·6	9·9	7·9	6·1
	Means for 15 years, 1866 to 1880	10·4	8·2	5·2	5·3	6·6	7·6	7·2	11·6	10·6	12·4	10·2	10·5	11·1	9·0
TEMPERATURE (in degrees Fahrenheit).		°	°	°	°	°	°	°	°	°	°	°	°	°	°
	1866	38·3	38·8	39·1	40·9	40·4	41·9	39·9	40·0	40·6	43·4	39·9	40·3	40·8	40·3
	1867	36·9	37·2	36·8	38·6	38·2	39·2	37·8	37·7	38·6	41·4	38·1	39·9	39·1	38·4
	1868	40·7	41·7	41·1	41·4	41·9	42·0	41·5	42·3	42·4	44·4	42·1	44·3	43·1	42·2
	1869	40·0	40·3	40·6	41·1	41·2	42·0	40·9	42·0	42·1	45·1	42·9	44·6	43·3	42·0
	1870	37·9	37·4	37·1	37·4	38·0	38·2	37·7	38·6	38·7	41·3	39·8	41·6	40·0	38·7
	1871	40·0	39·7	38·8	39·2	40·1	40·3	39·7	40·0	40·0	43·3	41·6	43·4	41·7	40·6
	1872	40·9	40·9	41·3	42·3	42·9	43·7	42·0	42·9	43·3	46·1	42·4	44·5	43·8	42·8
	1873	39·0	38·4	38·5	38·9	39·1	39·9	39·0	39·2	39·7	42·6	39·8	41·0	40·5	39·6
	1874	41·7	41·8	41·3	40·4	41·0	42·0	41·4	42·3	41·8	45·0	42·8	45·2	43·4	42·3
	1875	39·5	39·0	38·8	38·6	39·2	40·2	39·2	39·8	40·2	42·9	41·6	44·6	41·8	40·4
	Means for 10 years, 1866 to 1875	39·5	39·5	39·3	39·9	40·2	40·9	39·9	40·5	40·7	43·6	41·0	42·9	41·8	40·7
	1876	38·7	38·3	39·2	39·0	38·9	40·0	39·0	39·5	39·8	42·4	40·1	43·3	41·0	39·9
	1877	38·4	38·8	40·4	41·7	41·8	43·1	40·7	40·5	41·8	44·9	41·4	45·2	42·8	41·6
	1878	39·4	40·1	40·8	40·6	41·8	41·7	40·7	41·9	42·2	44·2	42·5	45·1	43·2	41·8
	1879	35·8	34·2	35·9	36·5	36·4	37·8	36·1	36·5	36·8	40·8	38·0	40·5	38·5	37·2
	1880	40·6	39·8	39·5	39·2	39·9	40·5	39·9	41·3	40·6	43·5	42·2	44·1	42·3	41·0
	Means for 15 years, 1866 to 1880	39·2	39·1	39·3	39·7	40·1	40·8	39·7	40·3	40·6	43·4	41·0	43·2	41·7	40·6

TABLE showing, for the WHEAT and GRAZING DISTRICTS, and for the COUNTRY generally, the DATES of the DRIEST and WETTEST, and the COLDEST and WARMEST corresponding Quarters for the 15 years, 1866 to 1880.

—	WHEAT DISTRICTS.	GRAZING, &c. DISTRICTS.	GENERALLY.
Rain.	**Rain.**	**Rain.**	**Rain.**
	inches.	inches.	inches.
Driest	1880 - - 4·7	1880 - - 7·9	1880 - - 6·1
Wettest	1866 - - 9·6	1872 - - 14·9	1866 - - 11·7
Temperature.	**Temperature.**	**Temperature.**	**Temperature.**
Coldest	1879 - - 36°·1	1879 - - 38°·5	1879 - - 37°·2
Warmest	1872 - - 42°·0	1872 - - 43°·8	1872 - - 42°·8

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NOTES.

1.—Rainfall.

The mean values for the Rainfall in the various districts given in this Table for the years 1866 to 1877 were obtained from observations made at the following stations :—

Districts.	Stations.
0. SCOTLAND, N.	Loch Broom. Helmsdale. Sandwick Manse.
1. SCOTLAND, E.	Inverness. Aberdeen. Ballater. Logierait. Stirling. Hawick.
2. ENGLAND, N.E.	N. Shields. York. Grimsby. Boston.
3. ENGLAND, E.	1866 to 1875: Fakenham. Beccles. Witham. Bury St. Edmunds. 1876 &1877.: Yarmouth. Cambridge. Bury St. Edmunds.
4. MIDLAND COUNTIES	Leicester. Derby. Tenbury. Shiffnal. Cirencester. Banbury. Hitchin.
5. ENGLAND, S.	Bridport. Selborne. Maidstone. London (Camden Town).
6. SCOTLAND, W.	Dumfries. Ayr. Castle Toward.
7. ENGLAND, N.W. and N. WALES.	Llandudno. Manchester. Skipton.
8. ENGLAND, S.W. and S. WALES.	Barnstaple. Bodmin. Haverfordwest. Rhayader.
9. IRELAND, N.	Galway. (Doo Castle), Bunninadden, Co. Sligo. Waringstown. Strabane.
10. IRELAND, S.	Cork. Waterford. Killaloe. Portarlington. Monkstown, Co. Dublin.

(The values were obtained mainly from Symons' Monthly Meteorological Magazine, supplemented by some of the values contained in the Reports of the Rainfall Committee of the British Association, 1868–1876.)

2.—Temperature.

The Temperature values for the years 1866 to 1877 have been obtained from the following stations :—

Districts.	Stations.
0. SCOTLAND, N.	Sandwick Manse. Stornoway. Dunrobin.
1. SCOTLAND, E.	Culloden. Aberdeen. Perth. Leith.
2. ENGLAND, N.E.	Bywell. N. Shields. Hull.
3. ENGLAND, E.	Royston. Holkham. Norwich. Wisbeach. Somerleyton.
4. MIDLAND COUNTIES	Derby. Nottingham. Cardington. Oxford.
5. ENGLAND, S.	Marlborough. Greenwich. Streatley. London (Camden Town). Weybridge. Strathfield Turgiss. Osborne. Bournemouth. Worthing.
6. SCOTLAND, W	Greenock. Cockermouth. Silloth. Carlisle.
7. ENGLAND, N.W. and N. WALES.	Stonyhurst. Bradford. Leeds. Eccles. Liverpool. Llandudno.
8. ENGLAND, S.W. and S. WALES.	Gloucester. Taunton. Barnstaple. Truro. Helston.
9. IRELAND, N.	1866 to 1873.: Belfast. Milltown (Banbridge). Armagh.† Athlone.* 1866 to 1877.: Moville. Milltown. Armagh. Donaghadee.
10. IRELAND, S.	1866 to 1873.: Dublin.* Curragh Camp. Buttevant.* Cork. Valentia.† 1874 to 1877.: Kingstown. Parsonstown. Cork. Roche's Point. Valentia.

(The values were obtained mainly from the returns published quarterly by the Registrar General and those published by the Scottish Meteorological Society, in their Quarterly Journal, and the reports of the Army Medical Department, besides the records of the two Irish observatories, Valentia and Armagh. The returns for Cork were furnished by R. Caulfield, Esq., LL.D.)

For the years 1878, 1879, and 1880 the means are obtained from the observations published in the Weekly Weather Report.

* Did not commence till January 1867.

† Did not commence till January 1869.

By Order,
ROBERT H. SCOTT,
Secretary.

SUMMARY OF RAINFALL AND TEMPERATURE for the SECOND QUARTER of the YEAR (April 1st to June 30th).

Vol. III., No. 26a. (Issued as Part of the Weekly Weather Report for the year 1880.)

	YEARS.	PRINCIPAL WHEAT-PRODUCING DISTRICTS.							PRINCIPAL GRAZING, &c. DISTRICTS.						BRITISH ISLANDS GENERALLY.
		0. SCOTLAND, N.	1. SCOTLAND, E.	2. ENGLAND, N.E.	3. ENGLAND, E.	4. MIDLAND COUNTIES.	5. ENGLAND, S.	MEAN FOR ALL THE WHEAT-PRODUCING DISTRICTS.	6. SCOTLAND, W.	7. ENGLAND, N.W.	8. ENGLAND, S.W.	9. IRELAND, N.	10. IRELAND, S.	MEAN FOR ALL THE GRAZING, &c. DISTRICTS.	
RAINFALL (in inches).		ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.
	1866	6·2	4·8	5·2	6·0	6·3	6·7	5·9	5·1	6·3	6·5	6·7	8·2	6·6	6·2
	1867	10·6	8·0	6·8	6·2	6·7	5·8	7·4	10·5	8·3	10·0	10·0	9·3	9·6	8·4
	1868	10·9	6·1	3·7	3·2	3·3	4·1	5·2	7·7	4·4	5·9	6·6	6·3	6·2	5·7
	1869	6·7	5·3	7·5	5·0	7·5	6·6	6·4	4·8	7·6	8·2	7·7	7·8	7·2	6·8
	1870	9·5	4·1	4·3	2·3	2·5	2·4	4·2	7·4	5·7	4·2	6·4	4·6	5·7	4·9
	1871	4·3	6·1	7·5	7·4	7·5	7·7	6·8	8·3	7·7	8·4	7·5	7·7	7·9	7·3
	1872	11·4	10·4	7·4	6·6	8·6	8·5	8·8	11·2	12·0	10·9	9·8	7·6	10·3	9·5
	1873	7·9	5·9	4·8	4·7	5·6	4·3	5·5	5·1	4·7	5·9	6·3	5·1	5·4	5·5
	1874	10·0	4·5	3·4	3·9	3·9	5·3	5·2	5·5	5·0	4·5	6·8	4·2	5·2	5·2
	1875	8·7	5·5	4·2	4·9	6·4	6·0	6·0	6·5	7·6	9·8	7·0	6·5	7·5	6·6
	Means for 10 years, 1866 to 1875	8·6	6·1	5·5	5·0	5·8	5·7	6·1	7·2	6·9	7·4	7·5	6·7	7·1	6·6
	1876	8·4	6·1	6·2	4·9	5·5	4·9	6·0	6·4	7·0	5·5	5·6	5·0	5·9	6·0
	1877	10·1	8·8	6·7	5·6	6·8	6·2	7·4	9·5	8·4	11·2	8·5	10·9	9·7	8·4
	1878	3·7	6·3	7·7	8·2	9·2	8·5	7·3	8·8	8·2	11·7	9·0	13·8	10·3	8·6
	1879	4·5	8·5	8·7	10·2	10·1	10·3	8·7	9·9	8·4	10·4	10·1	11·7	10·1	9·3
	1880	4·9	5·0	6·6	6·2	7·1	5·7	5·9	8·0	6·9	5·4	8·9	8·3	7·5	6·6
	Means for 15 years, 1866 to 1880	7·9	6·4	6·0	5·7	6·5	6·2	6·4	7·6	7·2	7·9	7·8	7·8	7·7	7·0
TEMPERATURE (in degrees Fahrenheit).		°	°	°	°	°	°	°	°	°	°	°	°	°	°
	1866	48·2	48·1	48·0	52·2	51·7	52·9	50·2	50·9	50·6	53·0	51·9	51·4	51·6	50·8
	1867	47·2	49·9	48·5	52·7	52·2	52·8	50·6	51·1	51·6	53·6	53·1	52·9	52·5	51·4
	1868	49·7	52·3	52·1	55·1	55·7	54·8	53·3	52·3	53·5	55·0	52·8	54·6	53·6	53·4
	1869	47·7	49·4	49·2	50·9	51·6	51·7	50·1	50·1	50·3	53·5	51·3	52·6	51·6	50·8
	1870	49·5	52·5	51·4	52·8	54·4	53·5	52·4	51·9	52·8	54·3	53·2	53·5	53·1	52·7
	1871	47·2	48·4	47·9	49·5	51·7	51·2	49·3	50·8	50·7	53·7	52·4	53·9	52·3	50·7
	1872	48·2	49·7	49·7	52·0	51·3	51·9	50·6	50·3	51·0	51·9	50·5	51·6	51·1	50·7
	1873	47·9	49·8	49·1	49·8	51·6	51·7	50·0	51·7	51·3	52·5	51·9	53·2	52·1	51·0
	1874	48·4	49·6	49·9	51·3	52·4	52·7	50·7	51·1	51·4	54·0	51·5	54·3	52·5	51·5
	1875	49·3	51·4	51·2	52·4	52·8	52·9	51·7	51·7	52·0	53·1	51·9	53·3	52·4	52·0
	Means for 10 years, 1866 to 1875	48·3	50·1	49·7	51·9	52·5	52·6	50·9	51·2	51·5	53·5	52·1	53·1	52·3	51·5
	1876	48·2	49·7	49·8	51·1	51·3	51·3	50·2	50·3	50·5	52·1	49·8	52·2	51·0	50·6
	1877	46·6	47·5	48·4	50·8	51·1	51·8	49·4	49·1	49·5	52·3	49·3	52·2	50·5	49·9
	1878	48·8	50·6	51·7	53·8	54·3	54·8	52·3	52·5	53·5	53·5	52·6	53·7	53·2	52·7
	1879	45·0	46·8	47·5	48·8	49·0	49·8	47·8	48·4	48·6	50·0	48·4	50·0	49·1	48·4
	1880	47·6	49·9	49·5	51·1	50·9	52·0	50·2	50·5	50·5	52·3	50·4	52·1	51·2	50·6
	Means for 15 years, 1866 to 1880	48·0	49·7	49·6	51·6	52·1	52·4	50·6	50·8	51·2	53·0	51·4	52·8	51·9	51·1

TABLE showing the DATES of the DRIEST and WETTEST, and the COLDEST and WARMEST corresponding Quarters for the 15 years, 1866 to 1880.

—		WHEAT DISTRICTS.		GRAZING, &c. DISTRICTS.		GENERALLY.	
			inches.		inches.		inches.
Rainfall	Driest	1870	4·2	1874	5·2	1870	4·9
	Wettest	1872	8·8	1872 and 1878	10·3	1872	9·5
			°		°		°
Temperature	Coldest	1879	47°·8	1879	49°·1	1879	48°·4
	Warmest	1868	53°·3	1868	53°·6	1868	53°·4

Q 2025*a*. 100.—8/80. Wt. 26. E. & S.

NOTES.

1.—Rainfall.

The mean values for the Rainfall in the various districts given in this Table for the years 1866 to 1877 were obtained from observations made at the following stations :—

Districts.	Stations.
0. SCOTLAND, N.	Loch Broom. Helmsdale. Sandwick Manse.
1. SCOTLAND, E.	Inverness. Aberdeen. Ballater. Logierait. Stirling. Hawick.
2. ENGLAND, N.E.	N. Shields. York. Grimsby. Boston.
3. ENGLAND, E. (1866 to 1875)	Fakenham. Beccles. Witham. Bury St. Edmunds.
3. ENGLAND, E. (1876 & 1877.)	Yarmouth. Cambridge. Bury St. Edmunds.
4. MIDLAND COUNTIES	Leicester. Derby. Tenbury. Shiffnal. Cirencester. Banbury. Hitchin.
5. ENGLAND, S.	Bridport. Selborne. Maidstone. London (Camden Town).
6. SCOTLAND, W.	Dumfries. Ayr. Castle Toward.
7. ENGLAND, N.W. and N. WALES.	Llandudno. Manchester. Skipton.
8. ENGLAND, S.W. and S. WALES.	Barnstaple. Bodmin. Haverfordwest. Rhayader.
9. IRELAND, N.	Galway. (Doo Castle), Bunninadden, Co. Sligo. Waringstown. Strabane.
10. IRELAND, S.	Cork. Waterford. Killaloe. Portarlington. Monkstown, Co. Dublin.

(The values were obtained mainly from Symons' Monthly Meteorological Magazine, supplemented by some of the values contained in the Reports of the Rainfall Committee of the British Association, 1868–1876.)

2.—Temperature.

The Temperature values for the years 1866 to 1877 have been obtained from the following stations :—

Districts.	Stations.
0. SCOTLAND, N.	Sandwick Manse. Stornoway. Dunrobin.
1. SCOTLAND, E.	Culloden. Aberdeen. Perth. Leith.
2. ENGLAND, N.E.	Bywell. N. Shields. Hull.
3. ENGLAND, E.	Royston. Holkham. Norwich. Wisbeach. Somerleyton.
4. MIDLAND COUNTIES	Derby. Nottingham. Cardington. Oxford.
5. ENGLAND, S.	Marlborough. Greenwich. Streatley. London (Camden Town). Weybridge. Strathfield Turgiss. Osborne. Bournemouth. Worthing.
6. SCOTLAND, W	Greenock. Cockermouth. Silloth. Carlisle.
7. ENGLAND, N.W. and N. WALES.	Stonyhurst. Bradford. Leeds. Eccles. Liverpool. Llandudno.
8. ENGLAND, S.W. and S. WALES.	Gloucester. Taunton. Barnstaple. Truro. Helston.
9. IRELAND, N. (1866 to 1873.)	Belfast. Milltown (Banbridge). Armagh.† Athlone.*
9. IRELAND, N. (1866 to 1877.)	Moville. Milltown. Armagh. Donaghadee.
10. IRELAND, S. (1866 to 1873.)	Dublin.* Curragh Camp. Buttevant.* Cork. Valentia.†
10. IRELAND, S. (1874 to 1877.)	Kingstown. Parsonstown. Cork. Roche's Point. Valentia.

(The values were obtained mainly from the returns published quarterly by the Registrar General and those published by the Scottish Meteorological Society, in their Quarterly Journal, and the reports of the Army Medical Department, besides the records of the two Irish observatories, Valentia and Armagh. The returns for Cork were furnished by R. Caulfield, Esq., LL.D.)

For the years 1878, 1879, and 1880 the means are obtained from the observations published in the Weekly Weather Report.

* Did not commence till January 1867. † Did not commence till January 1869.

By Order,
ROBERT H. SCOTT,
Secretary.

SUMMARY OF RAINFALL AND TEMPERATURE for the THIRD QUARTER of the YEAR (July 1st to September 30th).

Vol. III., No. 39a. (Issued as Part of the Weekly Weather Report for the year 1880.)

	YEARS.	PRINCIPAL WHEAT-PRODUCING DISTRICTS.							PRINCIPAL GRAZING, &c. DISTRICTS.						BRITISH ISLANDS GENERALLY.
		0. SCOTLAND, N.	1. SCOTLAND, E.	2. ENGLAND, N.E.	3. ENGLAND, E.	4. MIDLAND COUNTIES.	5. ENGLAND, S.	MEAN FOR ALL THE WHEAT-PRODUCING DISTRICTS.	6. SCOTLAND, W.	7. ENGLAND, N.W.	8. ENGLAND, S.W.	9. IRELAND, N.	10. IRELAND, S.	MEAN FOR ALL THE GRAZING, &c. DISTRICTS.	
RAINFALL (in inches).		ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.
	1866	11·8	10·6	9·3	7·9	11·7	9·7	10·2	15·1	16·1	15·2	12·0	8·9	13·4	11·7
	1867	10·0	10·1	7·1	7·1	7·4	8·6	8·4	12·9	10·4	8·7	11·8	8·8	10·5	9·4
	1868	9·7	10·4	6·0	4·2	7·1	7·2	7·4	9·1	6·7	9·5	8·1	11·0	8·9	8·1
	1869	12·8	7·0	5·8	5·6	6·4	6·0	7·3	10·4	11·5	9·9	9·4	8·5	9·9	8·5
	1870	8·6	5·8	3·5	5·8	4·5	4·8	5·5	6·8	5·0	7·0	7·6	5·7	6·4	5·9
	1871	13·0	8·7	9·7	7·5	10·8	10·3	10·0	9·8	11·8	14·2	11·1	10·5	11·5	10·7
	1872	13·1	12·5	10·4	9·8	9·4	6·6	10·1	16·1	15·8	13·1	14·7	11·2	14·2	12·0
	1873	13·7	11·8	7·2	6·4	6·8	7·3	8·9	15·7	11·8	14·0	14·2	11·8	13·5	11·0
	1874	15·5	11·6	5·8	5·1	7·1	6·3	8·6	13·4	12·6	13·8	11·8	10·1	12·3	10·3
	1875	11·2	8·9	9·1	8·6	11·5	9·4	9·8	11·2	12·7	15·3	9·2	10·6	11·8	10·7
	Means for 10 years, 1866 to 1875	11·8	9·7	7·4	6·8	8·3	7·6	8·6	12·1	11·4	12·1	11·0	9·7	11·3	9·8
	1876	8·9	7·4	8·0	8·1	9·0	7·9	8·2	10·3	11·2	13·8	10·0	9·6	11·0	9·5
	1877	10·8	11·3	10·1	8·1	10·4	7·6	9·7	12·6	15·4	14·5	12·0	10·4	13·0	11·2
	1878	8·0	8·2	8·5	6·9	8·9	7·6	8·0	10·2	11·0	9·5	8·2	10·8	9·9	8·9
	1879	9·8	10·0	8·8	12·2	11·3	11·2	10·6	15·9	13·9	13·3	15·6	12·5	14·2	12·2
	1880	7·6	7·7	10·6	9·9	11·2	9·4	9·4	9·6	10·5	8·0	9·8	10·7	9·7	9·5
	Means for 15 years, 1866 to 1880	10·9	9·4	8·0	7·5	8·9	8·0	8·8	12·0	11·7	12·0	11·0	10·1	11·4	10·0
TEMPERATURE (in degrees Fahrenheit).		°	°	°	°	°	°	°	°	°	°	°	°	°	°
	1866	53·2	55·4	55·4	57·6	56·8	58·1	56·1	56·2	56·8	58·4	56·0	57·2	56·9	56·5
	1867	53·7	56·0	55·9	58·8	58·5	59·2	57·0	57·2	58·2	60·0	58·5	59·4	58·7	57·8
	1868	55·0	58·5	58·8	62·5	62·4	62·4	59·9	59·5	61·2	63·6	59·1	60·8	60·8	60·3
	1869	54·5	57·4	57·6	60·2	60·5	60·3	58·4	58·2	59·1	61·4	59·5	59·8	59·6	59·0
	1870	55·6	58·1	57·2	59·6	60·5	60·3	58·6	58·5	59·5	61·7	59·6	60·3	59·9	59·2
	1871	55·1	57·4	57·5	59·9	59·5	60·1	58·3	57·3	58·3	60·6	57·2	58·0	58·3	58·3
	1872	54·0	55·9	57·1	59·7	60·1	60·3	57·9	57·7	59·1	60·7	57·9	59·3	58·9	58·3
	1873	54·1	56·4	57·3	59·1	58·7	59·4	57·5	57·4	57·8	59·5	56·6	57·9	57·8	57·7
	1874	54·4	56·7	57·9	60·2	60·3	60·2	58·3	57·8	58·8	60·6	56·9	59·0	58·6	58·4
	1875	54·8	57·0	57·8	59·7	59·6	60·2	58·2	58·4	58·7	60·6	57·5	60·0	59·0	58·6
	Means for 10 years, 1866 to 1875	54·4	56·9	57·3	59·7	59·7	60·1	58·0	57·8	58·8	60·7	57·9	59·2	58·9	58·4
	1876	54·3	56·3	57·7	60·4	60·7	61·1	58·4	57·6	58·8	61·0	56·6	59·4	58·7	58·5
	1877	52·7	55·0	55·5	57·9	57·7	58·2	56·2	55 3	56·0	58·3	55·1	57·3	56·4	56·3
	1878	55·2	58·5	59·1	60·4	60·2	61·6	59·2	59·2	59·5	61·3	58·8	60·7	59·9	59·5
	1879	52·4	54·2	56·2	58·1	57·8	58·7	56·2	55·2	56·2	57·5	54·8	57·5	56·2	56·2
	1880	55·9	57·8	59·5	61·1	60·1	62·1	59·4	58·6	59·8	61·3	58·8	60·1	59·7	59·6
	Means for 15 years, 1866 to 1880	54·3	56·7	57·4	59·7	59·6	60·2	58·0	57·6	58·6	60·4	57·5	59·1	58·7	58·3

TABLE showing the DATES of the DRIEST and WETTEST, and the COLDEST and WARMEST corresponding Quarters for the 15 years, 1866 to 1880.

—		WHEAT DISTRICTS.		GRAZING, &c. DISTRICTS.		GENERALLY.	
			inches.		inches.		inches.
Rainfall	Driest	1870	5·5	1870	6·4	1870	5·9
	Wettest	1879	10·6	1872 and 1879	14·2	1879	12·2
			°		°		°
Temperature	Coldest	1866	56°·1	1879	56°·2	1879	56°·2
	Warmest	1868	59°·9	1868	60°·8	1868	60°·3

Q 3129*a*. 100.—10/80. Wt. 26. E. & S.

NOTES.

1.—Rainfall.

The mean values for the Rainfall in the various districts given in this Table for the years 1866 to 1877 were obtained from observations made at the following stations :—

Districts.	Stations.
0. SCOTLAND, N.	Loch Broom. Helmsdale. Sandwick Manse.
1. SCOTLAND, E.	Inverness. Aberdeen. Ballater. Logierait. Stirling. Hawick.
2. ENGLAND, N.E.	N. Shields. York. Grimsby. Boston.
3. ENGLAND, E. (1866 to 1875)	Fakenham. Beccles. Witham. Bury St. Edmunds.
3. ENGLAND, E. (1876 & 1877.)	Yarmouth. Cambridge. Bury St. Edmunds.
4. MIDLAND COUNTIES	Leicester. Derby. Tenbury. Shiffnal. Cirencester. Banbury. Hitchin.
5. ENGLAND, S.	Bridport. Selborne. Maidstone. London (Camden Town).
6. SCOTLAND, W.	Dumfries. Ayr. Castle Toward.
7. ENGLAND, N.W. and N. WALES.	Llandudno. Manchester. Skipton.
8. ENGLAND, S.W. and S. WALES.	Barnstaple. Bodmin. Haverfordwest. Rhayader.
9. IRELAND, N.	Galway. (Doo Castle), Bunninadden, Co. Sligo. Waringstown. Strabane.
10. IRELAND, S.	Cork. Waterford. Killaloe. Portarlington. Monkstown, Co. Dublin.

(The values were obtained mainly from Symons' Monthly Meteorological Magazine, supplemented by some of the values contained in the Reports of the Rainfall Committee of the British Association, 1868–1876.)

2.—Temperature.

The Temperature values for the years 1866 to 1877 have been obtained from the following stations :—

Districts.	Stations.
0. SCOTLAND, N.	Sandwick Manse. Stornoway. Dunrobin.
1. SCOTLAND, E.	Culloden. Aberdeen. Perth. Leith.
2. ENGLAND, N.E.	Bywell. N. Shields. Hull.
3. ENGLAND, E.	Royston. Holkham. Norwich. Wisbeach. Somerleyton.
4. MIDLAND COUNTIES	Derby. Nottingham. Cardington. Oxford.
5. ENGLAND, S.	Marlborough. Greenwich. Streatley. London (Camden Town). Weybridge. Strathfield Turgiss. Osborne. Bournemouth. Worthing.
6. SCOTLAND, W	Greenock. Cockermouth. Silloth. Carlisle.
7. ENGLAND, N.W. and N. WALES.	Stonyhurst. Bradford. Leeds. Eccles. Liverpool. Llandudno.
8. ENGLAND, S.W. and S. WALES.	Gloucester. Taunton. Barnstaple. Truro. Helston.
9. IRELAND, N. (1866 to 1873.)	Belfast. Milltown (Banbridge). Armagh.† Athlone.*
9. IRELAND, N. (1866 to 1877.)	Moville. Milltown. Armagh. Donaghadee.
10. IRELAND, S. (1866 to 1873.)	Dublin.* Curragh Camp. Buttevant.* Cork. Valentia.†
10. IRELAND, S. (1874 to 1877.)	Kingstown. Parsonstown. Cork. Roche's Point. Valentia.

(The values were obtained mainly from the returns published quarterly by the Registrar General and those published by the Scottish Meteorological Society, in their Quarterly Journal, and the reports of the Army Medical Department, besides the records of the two Irish observatories, Valentia and Armagh. The returns for Cork were furnished by R. Caulfield, Esq., LL.D.)

For the years 1878, 1879, and 1880 the means are obtained from the observations published in the Weekly Weather Report.

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* Did not commence till January 1867.

† Did not commence till January 1869.

By Order,
ROBERT H. SCOTT,
Secretary.

SUMMARY OF RAINFALL AND TEMPERATURE for the FOURTH QUARTER of the YEAR (October 1st to December 31st).

Vol. III., No. 53a. (Issued as Part of the Weekly Weather Report for the year 1880.)

	YEARS.	PRINCIPAL WHEAT-PRODUCING DISTRICTS.							PRINCIPAL GRAZING, &c. DISTRICTS.						
		0. SCOTLAND, N.	1. SCOTLAND, E.	2. ENGLAND, N.E.	3. ENGLAND, E.	4. MIDLAND COUNTIES.	5. ENGLAND, S.	MEAN FOR ALL THE WHEAT-PRODUCING DISTRICTS.	6. SCOTLAND, W.	7. ENGLAND, N.W.	8. ENGLAND, S.W.	9. IRELAND, N.	10. IRELAND, S.	MEAN FOR ALL THE GRAZING, &c. DISTRICTS.	BRITISH ISLANDS GENERALLY.
RAINFALL (in inches).		ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.
	1866	20·6	9·0	6·0	5·9	6·7	6·3	9·1	14·4	15·3	12·4	11·9	9·2	12·6	10·7
	1867	16·8	5·7	4·8	5·7	5·5	5·8	7·4	10·4	10·3	12·1	9·6	7·5	10·0	8·6
	1868	19·0	10·3	9·5	7·9	9·7	11·4	11·3	15·1	18·5	18·3	14·0	14·3	16·0	13·5
	1869	19·8	9·8	7·9	9·1	7·7	8·5	10·5	14·0	13·6	14·3	13·1	9·5	12·9	11·6
	1870	16·0	9·3	10·5	8·4	8·6	9·5	10·4	10·6	16·0	15·9	14·6	12·2	13·9	12·0
	1871	15·1	7·3	5·4	4·3	4·2	4·6	6·8	10·7	10·7	12·4	7·6	9·4	10·2	8·3
	1872	18·0	15·0	11·6	10·6	12·0	16·5	14·0	16·3	17·4	25·1	16·8	17·6	18·6	16·1
	1873	21·2	9·6	8·5	4·6	4·6	6·5	8·3	11·7	10·6	9·4	7·9	7·7	9·5	8·8
	1874	17·8	9·2	8·0	7·0	7·4	10·6	10·0	14·4	15·0	16·0	13·0	12·7	14·2	11·9
	1875	13·7	11·1	10·1	9·6	11·4	11·2	11·2	12·5	12·7	18·5	10·1	13·1	13·4	12·2
	Means for 10 years, 1866 to 1875	17·8	9·6	7·7	7·3	7·8	9·1	9·9	13·0	14·0	15·4	11·9	11·3	13·1	11·4
	1876	13·7	13·2	10·5	7·5	11·7	13·4	11·7	16·0	14·1	19·1	14·4	17·6	16·2	13·7
	1877	23·1	11·3	6·4	6·4	7·4	10·6	10·9	18·1	17·8	17·2	14·3	14·0	16·3	13·3
	1878	11·1	8·4	10·3	9·7	8·0	8·5	9·3	11·1	9·0	13·6	11·9	8·2	10·8	10·0
	1879	8·6	4·8	3·6	3·4	2·7	2·6	4·3	6·2	5·5	4·5	5·0	4·3	5·1	4·7
	1880	12·8	8·5	9·8	9·3	11·0	13·0	10·7	12·3	13·7	16·1	9·5	12·6	12·8	11·7
	Means for 15 years, 1866 to 1880	16·5	9·5	7·8	7·3	7·9	9·3	9·7	12·9	13·3	15·0	11·6	11·3	12·8	11·1
TEMPERATURE (in degrees Fahrenheit).		°	°	°	°	°	°	°	°	°	°	°	°	°	°
	1866	43·6	44·2	45·1	46·1	45·7	46·8	45·3	46·0	46·2	50·3	45·4	46·9	47·0	46·0
	1867	43·9	42·9	42·3	43·0	42·6	43·2	43·0	43·4	42·9	45·8	44·2	44·9	44·2	43·6
	1868	42·0	42·0	43·1	44·8	44·3	45·5	43·6	43·6	44·2	48·1	44·0	45·5	45·1	44·3
	1869	40·9	41·5	41·8	42·7	42·9	43·7	42·3	42·5	43·9	46·6	44·7	45·5	44·6	43·3
	1870	40·3	40·0	40·3	41·6	41·3	41·9	40·9	40·5	41·6	44·4	41·5	43·2	42·2	41·5
	1871	42·2	42·1	42·3	41·5	41·7	41·8	41·9	42·4	43·0	45·3	43·2	44·7	43·7	42·7
	1872	42·4	42·0	43·3	44·4	44·2	45·4	43·6	43·6	44·4	47·3	42·8	44·1	44·4	44·0
	1873	43·4	42·9	44·2	43·9	43·6	44·5	43·8	44·2	44·7	46·9	44·3	46·3	45·3	44·4
	1874	41·4	39·9	40·8	41·8	41·7	43·0	41·4	40·5	42·3	46·0	42·8	45·7	43·5	42·4
	1875	42·7	42·1	43·0	42·7	43·0	43·5	42·8	42·8	43·6	45·9	43·5	46·0	44·4	43·5
	Means for 10 years, 1866 to 1875	42·3	42·0	42·6	43·3	43·1	43·9	42·9	43·0	43·7	46·7	43·6	45·3	44·5	43·6
	1876	44·0	43·4	45·2	46·2	44·8	47·2	45·1	44·6	46·1	49·0	45·7	48·1	46·7	45·8
	1877	42·9	43·3	43·6	44·4	44·1	44·8	43·9	44·5	45·3	49·2	44·4	47·4	46·2	44·9
	1878	40·5	39·7	39·8	40·8	40·7	42·3	40·6	40·9	41·5	44·5	42·1	42·8	42·4	41·4
	1879	41·8	41·0	40·3	39·7	39·8	41·2	40·6	42·2	42·0	45·3	43·0	45·0	43·5	41·8
	1880	39·1	40·4	42·4	43·6	45·6	45·3	42·7	42·2	43·6	47·7	42·9	44·9	44·3	43·4
	Means for 15 years, 1866 to 1880	42·1	41·9	42·5	43·2	43·1	44·0	42·8	43·0	43·7	46·8	43·6	45·4	44·5	43·6

TABLE showing the DATES of the DRIEST and WETTEST, and the COLDEST and WARMEST corresponding Quarters for the 15 years, 1866 to 1880.

—		WHEAT DISTRICTS.		GRAZING, &c. DISTRICTS.		GENERALLY.	
			inches.		inches.		inches.
Rainfall	Driest	1879	4·3	1879	5·1	1879	4·7
	Wettest	1872	14·0	1872	18·6	1872	16·1
			°		°		°
Temperature	Coldest	1878 and 1879	40·6	1870	42·2	1878	41·4
	Warmest	1866	45·3	1866	47·0	1866	46·0

Q 4632. 150.—2/81. Wt. 16521. E. & S.

NOTES.

1.—Rainfall.

The mean values for the Rainfall in the various districts given in this Table for the years 1866 to 1877 were obtained from observations made at the following stations :—

Districts.	Stations.
0. SCOTLAND, N.	Loch Broom. Helmsdale. Sandwick Manse.
1. SCOTLAND, E.	Inverness. Aberdeen. Ballater. Logierait. Stirling. Hawick.
2. ENGLAND, N.E.	N. Shields. York. Grimsby. Boston.
3. ENGLAND, E.	1866 to 1875: Fakenham. Beccles. Witham. Bury St. Edmunds. 1876 & 1877: Yarmouth. Cambridge. Bury St. Edmunds.
4. MIDLAND COUNTIES	Leicester. Derby. Tenbury. Shiffnal. Cirencester. Banbury. Hitchin.
5. ENGLAND, S.	Bridport. Selborne. Maidstone. London (Camden Town).
6. SCOTLAND, W.	Dumfries. Ayr. Castle Toward.
7. ENGLAND, N.W. and N. WALES.	Llandudno. Manchester. Skipton.
8. ENGLAND, S.W. and S. WALES.	Barnstaple. Bodmin. Haverfordwest. Rhayader.
9. IRELAND, N.	Galway. (Doo Castle), Bunninadden, Co. Sligo. Waringstown. Strabane.
10. IRELAND, S.	Cork. Waterford. Killaloe. Portarlington. Monkstown, Co. Dublin.

(The values were obtained mainly from Symons' Monthly Meteorological Magazine, supplemented by some of the values contained in the Reports of the Rainfall Committee of the British Association, 1868–1876.)

2.—Temperature.

The Temperature values for the years 1866 to 1877 have been obtained from the following stations :—

Districts.	Stations.
0. SCOTLAND, N.	Sandwick Manse. Stornoway. Dunrobin.
1. SCOTLAND, E.	Culloden. Aberdeen. Perth. Leith.
2. ENGLAND, N.E.	Bywell. N. Shields. Hull.
3. ENGLAND, E.	Royston. Holkham. Norwich. Wisbeach. Somerleyton.
4. MIDLAND COUNTIES	Derby. Nottingham. Cardington. Oxford.
5. ENGLAND, S.	Marlborough. Greenwich. Streatley. London (Camden Town). Weybridge. Strathfield Turgiss. Osborne. Bournemouth. Worthing.
6. SCOTLAND, W.	Greenock. Cockermouth. Silloth. Carlisle.
7. ENGLAND, N.W. and N. WALES.	Stonyhurst. Bradford. Leeds. Eccles. Liverpool. Llandudno.
8. ENGLAND, S.W. and S. WALES.	Gloucester. Taunton. Barnstaple. Truro. Helston.
9. IRELAND, N.	1866 to 1873: Belfast. Milltown (Banbridge). Armagh.† Athlone.* 1874 to 1877: Moville. Milltown. Armagh. Donaghadee.
10. IRELAND, S.	1866 to 1873: Dublin.* Curragh Camp. Buttevant.* Cork. Valentia.† 1874 to 1877: Kingstown. Parsonstown. Cork. Roche's Point. Valentia.

(The values were obtained mainly from the returns published quarterly by the Registrar General and those published by the Scottish Meteorological Society, in their Quarterly Journal, and the reports of the Army Medical Department, besides the records of the two Irish observatories, Valentia and Armagh. The returns for Cork were furnished by R. Caulfield, Esq., LL.D.)

For the years 1878, 1879, and 1880 the means are obtained from the observations published in the Weekly Weather Report.

* Did not commence till January 1867.

† Did not commence till January 1869.

By Order,
ROBERT H. SCOTT,
Secretary.

SUMMARY OF RAINFALL AND TEMPERATURE for the WHOLE YEAR.

Vol. III., No. 53b. (Issued as part of the Weekly Weather Report for the year 1880.)

	YEARS.	PRINCIPAL WHEAT-PRODUCING DISTRICTS.							PRINCIPAL GRAZING, &c. DISTRICTS.						BRITISH ISLANDS GENERALLY.
		0. SCOTLAND, N.	1. SCOTLAND, E.	2. ENGLAND, N.E.	3. ENGLAND, E.	4. MIDLAND COUNTIES.	5. ENGLAND, S.	MEAN FOR ALL THE WHEAT-PRODUCING DISTRICTS.	6. SCOTLAND, W.	7. ENGLAND, N.W.	8. ENGLAND, S.W.	9. IRELAND, N.	10. IRELAND, S.	MEAN FOR ALL THE GRAZING, &c. DISTRICTS.	
RAINFALL (in inches).		ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.
	1866	54·4	35·7	26·3	27·2	31·8	34·1	34·8	50·0	51·1	51·0	44·3	38·3	46·9	40·3
	1867	48·1	33·3	24·1	24·7	27·7	29·0	31·2	43·7	40·1	46·0	43·2	36·3	41·9	36·0
	1868	58·7	38·5	24·1	20·7	26·8	30·2	33·2	49·5	42·9	45·6	41·7	42·1	44·4	38·3
	1869	51·1	31·0	27·4	25·9	29·3	30·1	32·5	40·6	44·9	46·4	42·3	37·9	42·4	37·0
	1870	40·5	25·9	23·1	20·4	20·7	22·7	25·6	33·6	35·7	37·8	37·2	32·2	35·3	30·0
	1871	41·8	29·0	26·4	23·1	27·3	28·7	29·4	40·5	38·9	45·0	36·9	37·0	39·7	34·1
	1872	49·7	49·1	37·2	33·1	39·8	41·7	41·8	58·8	59·2	68·6	54·0	49·5	58·0	49·2
	1873	50·7	34·5	20·8	21·1	24·1	26·5	29·6	42·5	36·7	43·4	37·2	36·5	39·3	34·0
	1874	54·8	31·8	20·7	19·1	24·1	26·6	29·5	41·9	43·6	46·8	40·0	34·7	41·4	34·9
	1875	42·0	32·5	27·3	26·8	35·1	33·3	32·9	40·0	41·7	56·2	33·4	40·4	42·3	37·2
	Means for 10 years, 1866 to 1875	49·1	34·1	25·7	24·2	28·7	30·3	32·0	44·1	43·5	48·7	41·0	38·5	43·2	37·1
	1876	44·4	36·2	31·0	27·2	34·4	33·7	34·5	44·8	44·3	49·3	40·0	42·2	44·1	38·9
	1877	55·9	41·2	30·3	27·7	32·9	35·1	37·2	54·4	57·0	57·1	48·2	46·7	52·7	44·2
	1878	32·1	27·2	31·4	29·4	29·9	29·5	29·9	41·1	35·5	41·0	37·3	40·7	39·1	34·1
	1879	28·4	30·3	26·3	32·1	30·3	32·4	30·0	40·5	34·5	39·4	37·4	39·9	38·3	33·8
	1880	32·7	26·5	30·1	28·7	33·5	32·7	30·7	39·0	37·3	36·2	35·8	41·5	38·0	34·0
	Means for 15 years, 1866 to 1880	45·6	33·5	27·1	25·8	29·9	31·1	32·2	44·1	42·9	47·3	40·6	39·7	42·9	37·1
TEMPERATURE (in degrees Fahrenheit).		°	°	°	°	°	°	°	°	°	°	°	°	°	°
	1866	45·8	46·6	46·9	49·2	48·7	49·9	47·9	48·3	48·6	51·3	48·3	49·0	49·1	48·4
	1867	45·4	46·5	45·9	48·3	47·9	48·6	47·1	47·4	47·8	50·2	48·5	49·3	48·6	47·8
	1868	46·9	48·6	48·8	51·0	51·1	51·2	49·6	49·4	50·3	52·8	49·5	51·3	50·7	50·1
	1869	45·8	47·2	47·3	48·7	49·1	49·4	47·9	48·2	48·9	51·7	49·6	50·6	49·8	48·8
	1870	45·8	47·0	46·5	47·9	48·6	48·5	47·4	47·4	48·2	50·4	48·5	49·7	48·8	48·0
	1871	46·1	46·9	46·6	47·5	48·3	48·4	47·3	47·6	48·0	50·7	48·6	50·0	49·0	48·1
	1872	46·4	47·1	47·9	49·6	49·6	50·3	48·5	48·6	49·5	51·5	48·4	49·9	49·6	49·0
	1873	46·1	46·9	47·3	47·9	48·3	48·9	47·6	48·1	48·4	50·4	48·2	49·6	48·9	48·2
	1874	46·5	47·0	47·5	48·4	48·9	49·5	48·0	47·9	48·6	51·4	48·5	51·1	49·5	48·7
	1875	46·6	47·4	47·7	48·4	48·7	49·2	48·0	48·2	48·6	50·6	48·6	51·0	49·4	48·6
	Means for 10 years, 1866 to 1875	46·1	47·1	47·2	48·7	48·9	49·4	47·9	48·1	48·7	51·1	48·7	50·2	49·4	48·6
	1876	46·3	46·9	48·0	49·2	48·9	49·9	48·2	48·0	48·8	51·1	48·1	50·8	49·4	48·7
	1877	45·2	46·2	47·0	48·7	48·7	49·5	47·6	47·4	48·2	51·2	47·6	50·5	49·0	48·3
	1878	46·0	47·2	47·9	48·9	49·3	50·1	48·2	48·6	49·2	50·9	49·0	50·6	49·7	48·9
	1879	43·8	44·1	45·0	45·8	45·8	46·9	45·2	45·6	45·9	48·4	46·1	48·3	46·9	46·0
	1880	45·8	47·0	47·7	48·8	49·1	50·0	48·1	48·2	48·6	51·2	48·6	50·3	49·4	48·7
	Means for 15 years, 1866 to 1880	45·9	47·8	47·2	48·6	48·7	49·4	47·8	47·9	48·5	50·9	48·4	50·2	49·2	48·4

TABLE showing, the DATES of the DRIEST and WETTEST, and the COLDEST and WARMEST corresponding YEARS for the 15 years, 1866 to 1880.

—		WHEAT DISTRICTS.		GRAZING, &c. DISTRICTS.		GENERALLY.	
			inches.		inches.		inches.
Rainfall	Driest	1870	25·6	1870	35·3	1870	30·0
	Wettest	1872	41·8	1872	58·0	1872	49·2
			°.		°.		°.
Temperature	Coldest	1879	45°·2	1879	46°·9	1879	46°·0
	Warmest	1868	49°·6	1868	50°·7	1868	50°·1

Q 4633. 150.—2/81. Wt. 16521.

NOTES.

1.—Rainfall.

The mean values for the Rainfall in the various districts given in this Table for the years 1866 to 1877 were obtained from observations made at the following stations :—

Districts.	Stations.
0. SCOTLAND, N.	Loch Broom. Helmsdale. Sandwick Manse.
1. SCOTLAND, E.	Inverness. Aberdeen. Ballater. Logierait. Stirling. Hawick.
2. ENGLAND, N.E.	N. Shields. York. Grimsby. Boston.
3. ENGLAND, E. (1866 to 1875)	Fakenham. Beccles. Witham. Bury St. Edmunds.
3. ENGLAND, E. (1876 & 1877)	Yarmouth. Cambridge. Bury St. Edmunds.
4. MIDLAND COUNTIES	Leicester. Derby. Tenbury. Shiffnal. Cirencester. Banbury. Hitchin.
5. ENGLAND, S.	Bridport. Selborne. Maidstone. London (Camden Town).
6. SCOTLAND, W.	Dumfries. Ayr. Castle Toward.
7. ENGLAND, N.W. and N. WALES.	Llandudno. Manchester. Skipton.
8. ENGLAND, S.W. and S. WALES.	Barnstaple. Bodmin. Haverfordwest. Rhayader.
9. IRELAND, N.	Galway. (Doo Castle), Bunninadden, Co. Sligo. Waringstown. Strabane.
10. IRELAND, S.	Cork. Waterford. Killaloe. Portarlington. Monkstown, Co. Dublin.

(The values were obtained mainly from Symons' Monthly Meteorological Magazine, supplemented by some of the values contained in the Reports of the Rainfall Committee of the British Association, 1868–1876.)

2.—Temperature.

The Temperature values for the years 1866 to 1877 have been obtained from the following stations :—

Districts.	Stations.
0. SCOTLAND, N.	Sandwick Manse. Stornoway. Dunrobin.
1. SCOTLAND, E.	Culloden. Aberdeen. Perth. Leith.
2. ENGLAND, N.E.	Bywell. N. Shields. Hull.
3. ENGLAND, E.	Royston. Holkham. Norwich. Wisbeach. Somerleyton.
4. MIDLAND COUNTIES	Derby. Nottingham. Cardington. Oxford.
5. ENGLAND, S.	Marlborough. Greenwich. Streatley. London (Camden Town). Weybridge. Strathfield Turgiss. Osborne. Bournemouth. Worthing.
6. SCOTLAND, W	Greenock. Cockermouth. Silloth. Carlisle.
7. ENGLAND, N.W. and N. WALES.	Stonyhurst. Bradford. Leeds. Eccles. Liverpool. Llandudno.
8. ENGLAND, S.W. and S. WALES.	Gloucester. Taunton. Barnstaple. Truro. Helston.
9. IRELAND, N. (1866 to 1873)	Belfast. Milltown (Banbridge). Armagh.† Athlone.*
9. IRELAND, N. (1874 to 1877)	Moville. Milltown. Armagh. Donaghadee.
10. IRELAND, S. (1866 to 1873)	Dublin.* Curragh Camp. Buttevant.* Cork. Valentia.†
10. IRELAND, S. (1874 to 1877)	Kingstown. Parsonstown. Cork. Roche's Point. Valentia.

(The values were obtained mainly from the returns published quarterly by the Registrar General and those published by the Scottish Meteorological Society, in their Quarterly Journal, and the reports of the Army Medical Department, besides the records of the two Irish observatories, Valentia and Armagh. The returns for Cork were furnished by R. Caulfield, Esq., LL.D.)

For the years 1878, 1879, and 1880 the means are obtained from the observations published in the Weekly Weather Report.

* Did not commence till January 1867.

† Did not commence till January 1869.

By Order,
ROBERT H. SCOTT,
Secretary.

...IARY OF RAINFALL AND TEMPERATURE for the WHOLE YEAR.

Vol. IV., No. 52b. (Issued as Part of the Weekly Weather Report for the year 1881.)

	YEARS.	PRINCIPAL WHEAT-PRODUCING DISTRICTS.							PRINCIPAL GRAZING, &c. DISTRICTS.						BRITISH ISLANDS GENERALLY.
		0. SCOTLAND, N.	1. SCOTLAND, E.	2. ENGLAND, N.E.	3. ENGLAND, E.	4. MIDLAND COUNTIES.	5. ENGLAND, S.	MEAN FOR ALL THE WHEAT-PRODUCING DISTRICTS.	6. SCOTLAND, W.	7. ENGLAND, N.W.	8. ENGLAND, S.W.	9. IRELAND, N.	10. IRELAND, S.	MEAN FOR ALL THE GRAZING, &c. DISTRICTS.	
RAINFALL (in inches).		ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.	ins.
	1866	53·4	35·7	26·3	27·2	31·8	34·1	34·8	50·0	51·1	51·0	44·3	38·3	46·9	40·3
	1867	48·1	33·3	24·1	24·7	27·7	29·0	31·2	43·7	40·1	46·0	43·2	36·3	41·9	36·0
	1868	58·7	38·5	24·1	20·7	26·8	30·2	33·2	49·5	42·9	45·6	41·7	42·1	44·4	38·3
	1869	51·1	31·0	27·4	25·9	29·3	30·1	32·5	40·6	44·9	46·4	42·3	37·9	42·4	37·0
	1870	40·5	25·9	23·1	20·4	20·7	22·7	25·6	33·6	35·7	37·8	37·2	32·2	35·3	30·0
	1871	41·8	29·0	26·4	23·1	27·3	28·7	29·4	40·5	38·9	45·0	36·9	37·0	39·7	34·1
	1872	49·7	49·1	37·2	33·1	39·8	41·7	41·8	58·8	59·2	68·6	54·0	49·5	58·0	49·2
	1873	50·7	34·5	20·8	21·1	24·1	26·5	29·6	42·5	36·7	43·4	37·2	36·5	39·3	34·0
	1874	54·8	31·8	20·7	19·1	24·1	26·6	29·5	41·9	43·6	46·8	40·0	34·7	41·4	34·9
	1875	42·0	32·5	27·3	26·8	35·1	33·3	32·9	40·0	41·7	56·2	33·4	40·4	42·3	37·2
	Means for 10 years, 1866 to 1875	49·1	34·1	25·7	24·2	28·7	30·3	32·0	44·1	43·5	48·7	41·0	38·5	43·2	37·1
	1876	44·4	36·2	31·0	27·2	34·4	33·7	34·5	44·8	44·3	49·3	40·0	42·2	44·1	38·9
	1877	55·9	41·2	30·3	27·7	32·9	35·1	37·2	54·4	57·0	57·1	48·2	46·7	52·7	44·2
	1878	32·1	27·2	31·4	29·4	29·9	29·5	29·9	41·1	35·5	41·0	37·3	40·7	39·1	34·1
	1879	28·4	30·3	26·3	32·1	30·3	32·4	30·0	40·5	34·5	39·4	37·4	39·9	38·3	33·8
	1880	32·7	26·5	30·1	28·7	33·5	32·7	30·7	39·0	37·3	36·2	35·8	41·5	38·0	34·0
	1881	35·1	29·5	28·2	27·4	28·0	29·0	29·6	44·7	39·5	39·1	36·9	42·2	40·5	34·5
	Means for 16 years, 1866 to 1881	45·0	33·2	27·1	25·9	29·8	31·0	32·0	44·1	42·7	46·8	40·4	39·9	42·8	36·9
TEMPERATURE (in degrees Fahrenheit).		°	°	°	°	°	°	°	°	°	°	°	°	°	°
	1866	45·8	46·6	46·9	49·2	48·7	49·9	47·9	48·3	48·6	51·3	48·3	49·0	49·1	48·4
	1867	45·4	46·5	45·9	48·3	47·9	48·6	47·1	47·4	47·8	50·2	48·5	49·3	48·6	47·8
	1868	46·9	48·6	48·8	51·0	51·1	51·2	49·6	49·4	50·3	52·8	49·5	51·3	50·7	50·1
	1869	45·8	47·2	47·3	48·7	49·1	49·4	47·9	48·2	48·9	51·7	49·6	50·6	49·8	48·8
	1870	45·8	47·0	46·5	47·9	48·6	48·5	47·4	47·4	48·2	50·4	48·5	49·7	48·8	48·0
	1871	46·1	46·9	46·6	47·5	48·3	48·4	47·3	47·6	48·0	50·7	48·6	50·0	49·0	48·1
	1872	46·4	47·1	47·9	49·6	49·6	50·3	48·5	48·6	49·5	51·5	48·4	49·9	49·6	49·0
	1873	46·1	46·9	47·3	47·9	48·3	48·9	47·6	48·1	48·4	50·4	48·2	49·6	48·9	48·2
	1874	46·5	47·0	47·5	48·4	48·9	49·5	48·0	47·9	48·6	51·4	48·5	51·1	49·5	48·7
	1875	46·6	47·4	47·7	48·4	48·7	49·2	48·0	48·2	48·6	50·6	48·6	51·0	49·4	48·6
	Means for 10 years, 1866 to 1875	46·1	47·1	47·2	48·7	48·9	49·4	47·9	48·1	48·7	51·1	48·7	50·2	49·4	48·6
	1876	46·3	46·9	48·0	49·2	48·9	49·9	48·2	48·0	48·8	51·1	48·1	50·8	49·4	48·7
	1877	45·2	46·2	47·0	48·7	48·7	49·5	47·6	47·4	48·2	51·2	47·6	50·5	49·0	48·2
	1878	46·0	47·2	47·9	48·9	49·3	50·1	48·2	48·6	49·2	50·9	49·0	50·6	49·7	48·9
	1879	43·8	44·1	45·0	45·8	45·8	46·9	45·2	45·6	45·9	48·4	46·1	48·3	46·9	46·0
	1880	45·8	47·0	47·7	48·8	49·1	50·0	48·1	48·2	48·6	51·2	48·6	50·3	49·4	48·7
	1881	44·1	45·4	46·2	47·7	47·4	49·1	46·7	46·3	47·3	49·4	47·4	49·0	47·9	47·2
	Means for 16 years, 1866 to 1881	45·8	46·7	47·1	48·5	48·6	49·3	47·7	47·8	48·4	50·8	48·4	50·1	49·1	48·3

TABLE showing the DATES of the DRIEST and WETTEST, and the COLDEST and WARMEST corresponding YEARS for the 16 years, 1866 to 1881.

—		WHEAT DISTRICTS.		GRAZING, &c. DISTRICTS.		GENERALLY.	
			inches.		inches.		inches.
Rainfall	Driest	1870	25·6	1870	35·3	1870	30·0
	Wettest	1872	41·8	1872	58·0	1872	49·2
			°		°		°
Temperature	Coldest	1879	45°·2	1879	46°·9	1879	46°·0
	Warmest	1868	49°·6	1868	50°·7	1868	50°·1

R 146. 100.—1/82. Wt. 230. E. & S.

NOTES.

1.—Rainfall.

The mean values for the Rainfall in the various districts given in this Table for the years 1866 to 1877 were obtained from observations made at the following stations :—

Districts.	Stations.
0. SCOTLAND, N.	Loch Broom.
	Helmsdale.
	Sandwick Manse.
1. SCOTLAND, E.	Inverness.
	Aberdeen.
	Ballater.
	Logierait.
	Stirling.
	Hawick.
2. ENGLAND, N.E.	N. Shields.
	York.
	Grimsby.
	Boston.
3. ENGLAND, E. (1866 to 1875)	Fakenham.
	Beccles.
	Witham.
	Bury St. Edmunds.
3. ENGLAND, E. (1876 &1877.)	Yarmouth.
	Cambridge.
	Bury St. Edmunds.
4. MIDLAND COUNTIES	Leicester.
	Derby.
	Tenbury.
	Shiffnal.
	Cirencester.
	Banbury.
	Hitchin.
5. ENGLAND, S.	Bridport.
	Selborne.
	Maidstone.
	London (Camden Town).
6. SCOTLAND, W.	Dumfries.
	Ayr.
	Castle Toward.
7. ENGLAND, N.W. and N. WALES.	Llandudno.
	Manchester.
	Skipton.
8. ENGLAND, S.W. and S. WALES.	Barnstaple.
	Bodmin.
	Haverfordwest.
	Rhayader.
9. IRELAND, N.	Galway.
	(Doo Castle), Bunnin-nadden, Co. Sligo.
	Waringstown.
	Strabane.
10. IRELAND, S.	Cork.
	Waterford.
	Killaloe.
	Portarlington.
	Monkstown, Co. Dublin

(The values were obtained mainly from Symons' Monthly Meteorological Magazine, supplemented by some of the values contained in the Reports of the Rainfall Committee of the British Association, 1868–1876.)

2.—Temperature.

The Temperature values for the years 1866 to 1877 have been obtained from the following stations :—

Districts.	Stations.
0. SCOTLAND, N.	Sandwick Manse.
	Stornoway.
	Dunrobin.
1. SCOTLAND, E.	Culloden.
	Aberdeen.
	Perth.
	Leith.
2. ENGLAND, N.E.	Bywell.
	N. Shields.
	Hull.
3. ENGLAND, E.	Royston.
	Holkham.
	Norwich.
	Wisbeach.
	Somerleyton.
4. MIDLAND COUNTIES	Derby.
	Nottingham.
	Cardington.
	Oxford.
5. ENGLAND, S.	Marlborough.
	Greenwich.
	Streatley.
	London (Camden Town).
	Weybridge.
	Strathfield Turgiss.
	Osborne.
	Bournemouth.
	Worthing.
6. SCOTLAND, W.	Greenock.
	Cockermouth.
	Silloth.
	Carlisle.
7. ENGLAND, N.W. and N. WALES.	Stonyhurst.
	Bradford.
	Leeds.
	Eccles.
	Liverpool.
	Llandudno.
8. ENGLAND, S.W. and S. WALES.	Gloucester.
	Taunton.
	Barnstaple.
	Truro.
	Helston.
9. IRELAND, N. (1866 to 1873.)	Belfast.
	Milltown (Banbridge).
	Armagh.†
	Athlone.*
9. IRELAND, N. (1874 to 1877.)	Moville.
	Milltown.
	Armagh.
	Donaghadee.
10. IRELAND, S. (1866 to 1873.)	Dublin.*
	Curragh Camp.
	Buttevant.*
	Cork.
	Valencia.†
10. IRELAND, S. (1874 to 1877.)	Kingstown.
	Parsonstown.
	Cork.
	Roche's Point.
	Valencia.

(The values were obtained mainly from the returns published quarterly by the Registrar General and those published by the Scottish Meteorological Society, in their Quarterly Journal, and the reports of the Army Medical Department, besides the records of the two Irish observatories, Valencia and Armagh. The returns for Cork were furnished by R. Caulfield, Esq., LL.D.)

For the years 1878 to 1881 the means are obtained from the observations published in the Weekly Weather Report.

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* Did not commence till January 1867.

† Did not commence till January 1869.

By Order,
ROBERT H. SCOTT,
Secretary.